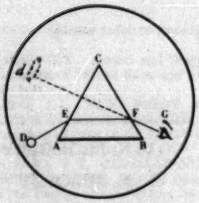

optics and spectroscopy

OPTICAL SOCIETY OF AMERICA

USSR ACADEMY OF SCIENCES

RUSSIAN EDITORIAL STAFF FOR

OPTIKA I SPEKTROSKOPIYA sponsored by

U.S.S.R. ACADEMY OF SCIENCES

Editor-in-Chief: S. E. FRISH

Deputy Editor-in-Chief: P. P. FEOFILOV

Executive Secretary: L. S. SAZONOV

Editorial Board:

M. V. VOLKENSTEIN	N. I. KALITEEVSKI	V. K. PROKOFEV
M. M. GUREVICH	V. P. LINNIK	N. N. SOBOLEV
M. A. ELYASHEVICH	S. L. MANDELSHTAM	F. M. GERASIMOV
D. Yu. GALPERN	I. V. OBREIMOV	B. S. NEPORENT

Translated from *Optika i Spektroskopiya* on the initiative of THE OPTICAL SOCIETY OF AMERICA, INC. *Optics and Spectroscopy* is a cover-to-cover translation of *Optika i Spektroskopiya* and no attempt is made to edit the material other than to correct obvious misprints. The views are those of the original authors and do not represent the Optical Society of America.

TRANSLATION EDITORIAL STAFF

Scientific Editors:

S. B. ELLIOTT, *Occidental College*

C. FELDMAN, *Oak Ridge National Laboratory*

C. W. GARLAND, *Massachusetts Institute of Technology*

M. G. GIBBONS, *Oakland, California*

L. M. MATARRESE, *National Bureau of Standards-Boulder*

Managing Editor:

P. R. WAKELING, *WINC*

Published monthly by the American Institute of Physics for the Optical Society of America, Inc., 2100 Pennsylvania Avenue N.W., Washington D.C. 20037. Office of the Managing Editor: WINC, 1613 19th Street N.W., Washington D.C. 20009. Subscription rates:

	U.S., Canada, Mexico	*Europe, etc. (air freight)*	*Foreign (surface mail)*
Non-member	$65	$70	$66
Member	$15	$20	$16

Back numbers: single copy $7; full year $70

Subscriptions, changes of address, and undeliverable copies should be referred to Subscription Department, American Institute of Physics, 335 East 45th Street, New York, N.Y. 10017.

Second Class postage paid at New York, New York and additional mailing offices

Printed in the U.S.A.
Composed by Scripta Technica, Inc., Washington, D.C.

OPTICS AND SPECTROSCOPY

AUTHOR INDEX

VOLUME 31 JULY-DECEMBER 1971

[Numbers in brackets refer to Russian original]

ABROSIMOV, G. V. Spatial and Temporal Coherence of the Radiation of Pulsed Neon and Thallium Gas Lasers—54 [106]

ADRIANOVA, I. I., Yu. V. POPOV, and V. E. TERENTEV. Study of Intracavity Modulation of a Ruby Laser with a Frequency Close to the Difference Frequency of Neighboring Axial Modes—527 [976]

AGEEV, L. A., V. K. MILOSLAVSKII, and I. N. SHKLYAREVSKII. Optical Constants of Ag I Thins Films in the Region of the Exciton Band—561 [1034]

ALEKSANDROV, E. B., V. N. KULYASOV, and A. B. MAMYRIN. Gain at the 3.51-μm and 5.57-μm Lines in a Xe^{131} Discharge—170 [315]

_____ and A. P. SOKOLOV. Method of Realization of Beat Nuclear Resonance—179 [329]

_____. Measurement of Relaxation Constants for the 5^3P_1 State of Cadmium Colliding with Inert Gas Atoms—353 [665]

ALEKSANYAN, V. T., E. R. RAZUMOVA, A. P. KURBAKOVA, and S. M. SHOSTAKOVSKII. Vibrational Spectra of Ethylene Oxide and Ethylene-d_4 Oxide—369 [692]

ALFIMOV, M. V. (see Lisovskaya, I. A.)—107 [200]

ALIEV, M. R. Calculation of the Centrifugal Stretching Constants of Polyatomic Molecules—301 [568]

_____. Rotational Profiles of Vibrational Bands in the Gas Phase Raman Spectra of Molecules of the Spherical Top Type—202 [376]

ALIKHANOVA, Z. M., V. F. ZOLIN, S. I. ROZMAN, P. S. FISHER, and G. V. ELLERT. Mechanism for the Appearance of Internal Vibrations of the Ligands in the Luminescence Spectra of Uranyl Compounds—177 [325]

ALIKIN, A. A., V. S. GRECHISHKIN, R. V. GRECHISHKINA, and V. M. GUSAROV. Excited States in Tetracyanoquinodimethane Complexes with Different Donors—133 [249]

ALSHITS, E. I., Z. L. MORGENSHTERN, and V. B. NEUSTRUEV. Quantum Yield of Ruby Luminescence with Ultraviolet Excitation—504 [932]

ALTSHULER, Yu. G., L. I. KATS, and R. M. REVZIN. Measurement of Liquid Nitrogen Electrophysical Parameters in the Submillimeter Wave-Length Range—344 [652]

ANTIPOV, B. A., V. E. ZUEV, P. D. PYRSIKOVA, and V. A. SAPOZHNIKOVA. Study of Methane Absorption Line Profile Using a Laser Tuned by a Magnetic Field—488 [899]

ARABIDZE, A. A., G. F. CHANTURIYA, V. P. KOKOEVA. Generation of Second Optical Harmonic in the Cubic Phase of $BaTiO_3$—346 [655]

ARKHANGEL'SKAYA, O. I. and N. G. BAKHSHIEV. Effect of Intermolecular Interactions on the Vibrational Spectra of Molecules. IX. Method for Determining the Dipole Moment and Polarizability Functions of Diatomic Molecules in Solution—26 [53]

_____. Effect of Intermolecular Van Der Waals Interactions on the Infrared Spectra of Hydrogen Bonded Complexes—167 [311]

ASLANIDI, E. B., E. A. TIKHONOV, and M. T. SHPAK. Nonlinear Absorption of Ruby Laser Radiation by Azulene Solutions—233 [436]

ASMARYAN, E. A. and Yu. L. KLIMONTOVICH. Spectral Line Broadening by Electrons in Nonequilibrium Partly Ionized Plasma—14 [30]

BABENKO, S. D. and V. A. BENDERSKII. Fluorescence of Pyrene Solutions under Intense Excitation—485 [895]

BAKHSHIEV, N. G. (see Arkhangel'skaya, O. I.)—26 [53]

BAKHSHIEV, N. G. (see Gorodyskii, V. A.)—117 [218]

_____. (see Libov, V. S.)—24 [48]

_____. (see Neporent, B. S.)—349 [659]

BALMAKOV, M. D. and A. V. TULUB. Determination of the Upper and Lower Limits of the Dispersion Interaction Constant from the Dynamic Polarizability—304 [574]

BARTENEV, O. A., A. M. SKRIPKIN, I. E. GRINKO, V. F. TERZEMAN, and I. A. SHUSHPANOV. Observation of the Transverse Faraday Effect in Optically Oriented Vapors of the Natural Hg^{199} and Hg^{201} Isotope Mixture—94 [175]

BELOKRINITSKII, N. S., N. G. ZUBRILIN, and M. T. SHPAK. Time Development of Wide-Band-Generation Spectra of Nd^{3+}-Doped Phosphate Glasses and Disordered Crystals in Resonators with Dispersion—411 [766]

BELYAEVA, A. A., M. I. DVORKIN, and L. D. SHCHERBA. Infrared Absorption Spectra of Cs_2SO_4 Molecules Stabilized in Inert Gas Matrixes at 4.2 K—309 [585]

_____. Infrared Spectra of KOH and $(KOH)_2$ Molecules Stabilized in an Argon Matrix at 4.2 K—210 [392]

BENDERSKII, V. A. (see Babenko, S. D.)—485 [895]

_____ and S. I. KHUDYAEV. Calculation of Light Absorption in Molecular Crystals—496 [915]

BEREZHNOI, A. A. Light Beam Deflection Controlled with a Prism of Lead Magnesioniobate Crystals—432 [803]

BEREZIN, A. A. Asymptotics of a Weakly Bound Electron Wave Function and Photodisintegration Cross Section for the F^- Color Center—320 [608]

BERIDZE, D. K. and G. R. DZHOBAVA. Study of Multiple Light Scattering. II—423 [788]

BEZVERKHNYAYA, G. I. (see Morozov, V. P.)—300 [565]

BOBOVICH, Ya. S. and A. V. BORTKEVICH. The Effect of Laser Fundamental Radiation on the Excitation of Stimulated Raman Scattering (SRS) by Its Second Harmonic—225 [424]

BOCHKOVA, O. P. and N. B. CHERNYSHEVA. Excitation of Nitrogen Molecules in a High-Frequency Argon-Nitrogen Discharge—359 [677]

BODUNOV, E. N. Effect of Electrostatic Interaction of Particles on Nonradiative Energy Transfer in Liquid Solutions. Part II—513 [949]

_____. Effect of Particle Charge on Radiationless Energy Transfer I: Viscous Solutions—219 [410]

BOGDANOV, V. V. and D. K. MYNBAEV. Lock-In Band of a Bas Ring Laser—51 [101]

BOGDANOVA, I. P. and V. D. MARUSIN. Study of Excitation Functions of the 6^3P_1 and 6^3P_0 Levels of Mercury in a Sodium-Mercury Vapor Mixture—184 [339]

BOGOMOLOV, A. S., N. G. VLASOV, and E. G. SOLOVEV. A Method for Time Averaging in Holographic Interferometry of Nonperiodically Moving Bodies—256 [481]

BOGOMOLOV, S. G. (see Kasimov, B. G.)—362 [682]

BOGOMOLOVA, G. A., A. A. KAMINSKY, P. V. KLEVTSOV, A. B. KUZNETSOV, L. LI, and A. A. PAVYLUK. Spectroscopic Study of $KY(MoO_4)_2$ Single Crystals Activated by Er^{3+} Ions—139 [259]

BOITSOV, V. F. Three-Mirror Ring Optical Resonator with a Gaussian Diaphragm—519 [961]

BOLDESKUL, A. E., G. P. BUYAN, I. I. KONDILENKO, V. N. NOVICHENKO, and V. E. POGORELOV. Computer Calculation of the True Profiles of Raman Lines—306 [579]

BORISOVA, M. S. and V. M. YASINSKII. Interaction of Modes in a Traveling-Wave Argon Laser—231 [433]

BORODIN, V. S., V. D. GEBEKOV, and Yu. M. KAGAN. Plasma Diagnostics of a Pulsed Discharge in a Plasma—280 [525]

BORTKEVICH, A. V. (see Bobovich, Ya. S.)—225 [424]

BRATASHEVSKII, Yu. A., V. A. VOLOSHIN, A. I. SAVUTSKII, and Yu. A. SIRYUK. Disappearance of Deep Electron Traps in ZnS under the Influence of Pressure—557 [1030]

BRODIN, M. S., M. A. DUDINSKII, and S. V. MARISOVA. Spectral Evidence of Surface States in the Anthracene Crystal—401 [749]

BRODOVICH, N. A. Mode Locking Using Single-Side-Band Modulation—228 [428]
BUDAGYAN, I. F. (see Mirovitskii, D. I.)—538 [1000]
BUGAEV, V. N., N. P. KRUPSKII, and A. V. CHALYI. Light Scattering Study of the Properties of Binary Mixture Thermodynamic Functions near the Critical Point of Vaporization—388 [724]
BUNDEL, A. A., A. V. VISHNYAKOV, and V. A. CHASHCHIN. Letter to the Editor—261 [488]
BUTYLKIN, V. S., A. E. KAPLAN, and Yu. G. KHRONOPULO. Self-Action of Light Arising from Stimulated Raman Scattering—120 [224]
BUYAN, G. P. (see Boldeskul, A. E.)—306 [579]
CHAIKA, M. Light Absorption by Vapor with Hidden Alignment—356 [670]
_____. Narrowing of the Profile of a Spectral Line by Alignment in the Case of Radiation Trapping—274 [513]
_____. (see Kazantsev, S.)—273 [510]
CHALYI, A. V. (see Bugaev, V. N.)—388 [724]
CHANTURIYA, G. F. (see Arabidze, A. A.)—346 [655]
CHASHCHIN, V. A. (see Bundel, A. A.)—261 [488]
CHEBOTAEV, V. P. (see Matyugin, Yu. A.)—56 [111]
CHEBURKIN, N. V. (see Vladimirova, N. M.)—91 [169]
CHERKASOV, A. S. (see Snegov, M. I.)—451 [835]
CHERNOV, V. I. (see Vlasov, N. G.)—419 [780]
CHERNYSHEVA, N. B. (see Bochkova, O. P.)—359 [677]
DANCHINOV, K. M., A. N. RODIONOV, E. A. GASTILOVICH, and D. N. SHIGORIN. Theoretical Investigation of the Infrared Spectra of Benzonitrile, Benzonitrile-d_5, and Phenylacetylene—341 [648]
DAVYDOV, E. M. and V. A. MISHIN. Use of the PRK Mercury Lamp as an Intense Pulsed Source of a Line Spectrum in the Near Infrared—550 [1020]
DENISYUK, Yu. N. and S. I. SOSKIN. Holographic Correction of Deformational Aberrations of the Main Mirror of a Telescope—535 [992]
_____. Scanning of a Wave Field by an Optical System of Arbitrary Aperture—61 [121]
DOINIKOV, A. S. and V. G. DOROGOV. Effect of the Bulb on Brightness Distribution of Straight Tubular Gas-Discharge Lamps—440 [817]
DOMNIN, P. I. and V. L. KUZMIN. Interpretation of Spectrophone Measurements of the Lifetimes of Vibrational States of the CO_2 Molecule—112 [209]
DOROGOV, V. G. (see Doinikov, A. S.)—440 [817]
DOVGII, Yu. O., V. N. KOROLYSHIN, E. G. MOROZ, and V. V. TURKEVICH. Polarization Shift of Absorption Edge in Ag_3SbS_3—165 [307]
DRICHKO, N. M., S. B. IOFFE, and E. I. MOGILEVSKII. Narrow-Band Electrically Controlled Interference-Polarizing Filter for Solar Physics Studies—241 [453]
DUDINSKII, M. A. (see Brodin, M. S.)—401 [749]
DUNE, A. N. (see Mylnikov, V. S.)—217 [405]
DVORKIN, M. I. (see Belyaeva, A. A.)—210 [392]
_____. (see Belyaeva, A. A.)—309 [585]
DYACHENKO, A. A., M. V. PERSIKOV, and O. E. SHUSHPANOV. Use of Shadowgraphs for Spectral Functional Analysis by the Methods of Coherent Optics—249 [469]
DZHOBAVA, G. R. (see Beridze, D. K.)—423 [788]
EFRYUSHINA, N. P. (see Poluektov, N. S.)—323 [613]
EL SHAZLI, A. F. A. (see Shklyarevskii, I. N.)—435 [807]
ELSNER, Z. N. (see Zhiginskii, A. G.)—223 [419]
EVDOKIMOV, Yu. V. and N. I. KALITEEVSKII. Relation between the Optical Broadening and Depolarization of Spectral Lines Due to Collisions—346 [656]
FAINBERG, B. D. (see Kiselev, B. A.)—544 [1011]
FEDOROV, V. B. (see Verbovetskii, A. A.)—339 [646]
FEOFILOV, P. P. The Nature of Light—350 [661]
_____. Raman Luminescence of EuA_1O_3-Mn^{4+} 462 [849]
_____. (see Ovsyankin, V. V.)—510 [944]
_____. (see Zapasskii, V. S.)—463 [850]
FIRSOVA, O. V. (see Vlasov, N. G.)—419 [780]
FISHER, P. S. (see Alikhanova, Z. M.)—177 [325]
FOMIN, V. V. (see Tvorogov, S. D.)—554 [1026]
FRADKIN, E. E. Diffraction Splitting of the Frequencies in a Gas Ring Laser—514 [952]
FUGOL, I. Ya., D. A. MYSHKIS, and O. N. GRIGORASHCHENKO. Absorption Methods for Measuring the Absolute Concentration of Metastable Helium Atoms in a Plasma—282 [529]
GAIDUK, M. I. Luminescence Spectra and Structure of Complex Europium Compounds I. Relative Intensities of Certain Electric and Magnetic Dipole Transitions of Eu^{3+} in Low-Symmetry Complexes—48 [93]
GAINER, A. V., S. V. KRUGLOV, G. S. KRIVOSHCHEKOV, V. V. LEBEDEV, and S. I. MARENNIKOV. Conversion of an Image from the Infrared to the Visible Region with a Large Angular Aperture—415 [772]
GALANT, E. I., A. L. REISHAKHRIT, and M. N. TOLSTOI. Effect of Aluminum Coordination in Glasses upon the Spectroscopic Properties of a Rare-Earth Activator—142 [266]
GALPERN, D. Yu. Optical Instruments and Technique—349 [660]
GALUTVA, Yu. N. and Yu. S. OSELEDCHIK. Nonlinear Interference Effect in a Random Field—173 [320]
GANIN, V. A. (see Glushkov, Yu. I.)—43 [82]
GASTILOVICH, E. A. (see Danchinov, K. M.)—341 [648]
GAVA, S. A. (see Poluektov, N. S.)—45 [86]
GEBEKOV, V. D. (see Borodin, V. S.)—280 [525]
GERASIMOV, G. N. and G. P. STARTSEV. Decay of 2^1S_0 States in Helium Afterglow—186 [344]
GERSHUN, V. V., V. KHUTORSHCHIKOV, and N. N. YAKOBSON. Displacement of the 7947-A Line of Rubidium by Foreign Gases—470 [866]
GINZBURG, I. M. and V. S. KHLEVNYUK. Fermi Resonance in the Infrared Spectrum of Cyclopentanone—169 [313]
GLADKIN, L. P. and L. A. KLIMOVA. Effect of Phase Changes in Crystalline Cyclohexane on the Fluorescence Spectra of 3,4-Benzopyrene—314 [596]
GLUSHKOV, Yu. I., B. M. YAVORSKII, and V. A. GANIN. Effect of Crystallization Conditions and Concentration on the Luminescence Spectrum of Some Aromatic Hydrocarbons in n-Paraffin Solution at 77 K—43 [82]
GODNEV, I. N. (see Timoshinin, V. S.)—200 [372]
_____. (see Timoshinin, V. S.)—555 [1027]
GOLDINA, N. D. and Yu. V. TROITSKII. Experimental Study of a Multiple-Beam Reflection Interferometer with a Matched Front Mirror—75 [146]
GOLUBOVSKII, Yu. B., Yu. M. KAGAN, and R. I. LYAGUSHCHENKO. Population of Resonant Levels in a Discharge of Cylindrical Configuration—10 [22]
GORBUNOVA, T. A. (see Zolotarev, V. M.)—40 [77]
GORDEEV, A. D. (see Kyuntsel, I. A.)—35 [67]
GORELIK, V. S. (see Zhdanova, A. S.)—490 [903]
GORODYSKII, V. A. and N. G. BAKHSHIEV. Intermolecular Interactions and the Spectra of Molecules in Multicomponent Solutions. III: Determination of the Stabilization Energy of the Electronic Levels of a Molecule as a Consequence of Universal Interactions on Changing from the Vapor to a Binary Solvent—117 [218]
GOROKHOV, A. V. Anharmonic Deformation Vibrations and Overlap Integrals for Linear Triatomic Molecules—480 [885]
GRADYUSHKO, A. T. and M. P. TSVIRKO. Probabilities of Intercombination Transitions in Porphyrin and Metalloporphyrin Molecules—291 [548]
GREBENNIK, T. G. (see Shklyarevskii, I. N.)—221 [414]
GREBENSHCHIKOV, D. M., N. A. KOVRIZHNYKH, and S. A. KOZLOV. Effect of Polymorphic Transformations in Isooctane Crystals on the Luminescence of Impurity Molecules—214 [398]
GREBENSHCHIKOV, D. M., N. A. KOVRIZHNYKH, and S. A. KOZLOV. Spectra and Temperature Dependence of Phosphorescence of Aromatic Compounds in Crystalline

Solutions of Isooctane and Carbon Tetrachloride—392 [733]
GREBNEVA, V. L. (see Popov, K. R.)—195 [363]
GRECHISHKIN, V. S. (see Alikin, A. A.)—133 [249]
GRECHISHKINA, R. V. (see Alikin, A. A.)—133 [249]
GRIBOV, L. A. Solution of the Problem of Anharmonic and High Amplitude Vibrations for Polyatomic Molecules in Exact Natural Vibrational Coordinates—456 [842]
GRIGORASHCHENKO, O. N. (see Fugol, I. Ya.)—282 [529]
GRIGORIEVA, N. A. (see Shvedova, N. D.)—385 [719]
GRINKO, I. E. (see Bartenev, O. A.)—94 [175]
_____, V. F. TERZEMAN, Yu. M. PETUKHOV, and I. A. SHUSHPANOV. Study of the Relaxation Time of Optically Oriented Atoms of Odd Mercury Isotopes in Stabilized Cells—6 [14]
GUBANOV, A. M. and S. I. KUROVSKII. Determination of the Vibrational Temperature T_{11} of the N_2 Molecule in the $B^3\Pi_g$ State Using the Relative Intensity of the First Positive Band System—338 [644]
GUBANOV, V. A. (see Kasimov, B. G.)—362 [682]
GUREV, T. T., V. V. KYUN, and Yu. N. SHEVCHENKO. Optimum Conditions for Emission of the 5208.3-A, 5681.9-A, and 6470.9-A Lines in a Singly Ionized Krypton Laser—410 [763]
GURINOVICH, G. P. (see Semenova, I. A.)—198 [368]
GUSAROV, V. M. (see Alikin, A. A.)—133 [249]
IOFFE, S. B. (see Drichko, N. M.)—241 [453]
IOGANSEN, A. V. (see Rosenberg, M. Sh)—380 [711]
IONIKH, Yu. Z. and N. P. PENKIN. Excitation of the 2p-3s Lines of Neon in a Helium-Neon Mixture—453 [837]
ISAEV, A. A., M. A. KAZARYAN, and G. G. PETRASCH. Mechanism of Pulsed Lasing of the Green Thallium Line in a Thallium Iodide Vapor Discharge—180 [332]
IVANOV, A. V., L. D. TIMAKOVA, and V. N. KUPRIYANOV. X-Ray L_{23} Spectra of the Quantum Efficiency of Sulfur Photoemission in Sulfides and Sulfates—171 [317]
IVANOV, L. N., E. P. IVANOVA, and U. I. SAFRONOYA. Third-Order Feynman Diagrams for Degenerate States of Atomic Systems—263 [489]
IVANOVA, A. N. (see Safronova, U. I.)—266 [496]
IVANOVA, E. P. (see Ivanov, L. N.)—263 [489]
KAGAN, Yu. M. (see Borodin, V. S.)—280 [525]
_____. (see Golubovskii, Yu. B.)—10 [22]
_____. (see Vagner, S. D.)—475 [876]
KALDER, K. A. and A. F. MALYSHEVA. Exciton and Electron-Hole Processes in CaF_2 and SrF_2 Crystal Phosphors—135 [252]
KALITEEVSKII, N. I. (see Evdokimov, Yu. V.)—346 [656]
KALMAKOV, A. A. (see Zhiglinskii, A. G.)—472 [870]
KAMINSKII, A. A. Spectroscopic Study of Stimulated Radiation of Er^{3+} Activated CaF_2 - YF_3 Crystals—507 [938]
KAMINSKY, A. A. (see Bogomolova, G. A.)—139 [259]
KAPLAN, A. E. (see Butylkin, V. S.)—120 [224]
KASIMOV, B. G., S. G. BOGOMOLOV, and V. A. GUBANOV. Calculation and Interpretation of the Electronic Spectrum of Decacyclene—362 [682]
KATS, L. I. (see Altshuler, Yu. G.)—344 [652]
KATS, S. M. (see Shvedova, N. D.)—385 [719]
KAZANSKII, S. A. and A. I. RYSKIN. Formation of a Bound State in ZnS-Ni, CdS-Ni Crystals under Light Absorption in a Charge-Transfer Band—325 [618]
KAZANTSEV, S. and M. CHAIKA. Estimate of the Lifetime on the $^3P_1$ Neon Resonance Level Using Interference Phenomena—273 [510]
KAZARYAN, M. A. (see Isaev, A. A.)—180 [332]
KHAKHAEV, A. D. (see Krylova, S. I.)—563 [1037]
KHARCHENKO, N. P. (see Melnik, V. I.)—102 [190]
KHILKO, G. I. (see Ryskin, A. I.)—405 [755]
KHLEVNYUK, V. S. (see Ginzburg, I. M.)—169 [313]
KHOLMOGOROV, V. E. and V. G. MASLOV. Absorption Spectra and EPR of Photogenerated Anion-Radicals of Zn-Tetraphenylporphine and Tetraphenylporphine—104 [195]
KHRISTENKO, L. V. and Yu. A. PENTIN. Analysis of the Normal Vibrations of Vinylsilane-d_3—444 [825]
KHRISTENKO, S. V. and S. I. VETCHINKIN. Asymptotic Expansions in 1/Z in Perturbation Theory for Probabilities of Resonance Transitions in Atoms—269 [503]
KHRONOPULO, Yu. G. (see Butylkin, V. S.)—120 [224]
KHUDYAEV, S. I. (see Benderskii, V. A.)—496 [915]
KHUE, KHUN. (see Kondilenko, I. I.)—203 [380]
KHUTORSHCHIKOV, V. (see Gershun, V. V.)—470 [866]
KISELEV, B. A. and B. D. FAINBERG. High Speed Spectrometry in the Presence of Absorption Nonlinearity—544 [1011]
KISHKO, S. M. (see Zayats, I. A.)—285 [536]
KISTVIN, V. N. (see Kuznetsov, V. A.)—77 [151]
KITAIGORODSKII, A. I. and E. I. MUKHTAROV. Calculation of the Small-Vibration Spectra of Molecular Crystals—377 [706]
KLEMENTEVA, A. Yu. (see Korolev, F. A.)—71 [138]
KLENIN, V. I. (see Shchegolev, S. Yu.)—426 [794]
KLEVTSOV, P. V. (see Bogomolova, G. A.)—139 [259]
KLIMCHITSKAYA, G. L. and L. N. LABZOVSKII. Calculation of Correlation Energy for a Many-Electron Atom in the Two-Body Approximation—1 [3]
KLIMENKO, I. S. and E. G. MATINYAN. Obtaining Holograms of Focused Images in Multimode Laser Radiation—250 [471]
_____. Recording of Focused-Image Holograms Using Radiation Scattered by the Object as the Reference Wave—417 [776]
KLIMONTOVICH, Yu. L. (see Asmaryan, E. A.)—14 [30]
KLIMOVA, L. A. (see Gladkin, L. P.)—314 [596]
KLIMUSHEVA, G. V. and R. V. YAREMKO. Exciton States of Some Pure and Mixed Molecular Crystals I: Absorption Spectra of Crystals of p-Dichloro, p-Dibromo, and p-Bromochlorobenzene—130 [243]
KLYUCHAREV, A. N. and N. S. RYAZANOV. Effective Cross Section for Associative Ionization of Cesium from the $8^2P_{1/2}$ State—187 [347]
KOBZEV, G. A. Photodecay of a Negative Nitrogen Ion in a Plasma—18 [37]
KOCHEMIROVSKII, A. S. (see Zhiglinskii, A. G.)—472 [870]
KOKOEVA, V. P. (see Arabidze, A. A.)—346 [655]
KOLOKOLOV, A. A. and G. V. SKROTSKII. Self-Focusing Kinetics of Short Light Pulses—342 [650]
KONDILENKO, I. I. (see Buyan, G. P.)—306 [579]
KONDILENKO, I. I., P. A. KOROTKOV, and G. S. LITVINO. Dependence of the Magnitude of the Davydov Splitting in Raman Spectra on the Elementary Cell Parameters of the Crystal—125 [234]
_____, P. A. KOROTKOV, and V. I. MALYI. Effect of Intermolecular Interaction on Stimulated Raman Spectra of Pyridine Solutions—493 [909]
_____, V. E. POGORELOV, and KHUN KHUE. Relationship between the Temperature Dependences of Widths and Integrated Intensities of Polarized Raman Lines—203 [380]
KONEVSKAYA, N. D. (see Pozdeev, N. M.)—32 [63]
KONKOV, I. D. (see Vladimirova, N. M.)—91 [169]
KONYUKHOV, G. P. (see Nesmelov, E. A.)—68 [133]
KORNEEVA, T. I. (see Shklyarevskii, I. N.)—144 [270]
_____. (see Shklyarevskii, I. N.)—221 [414]
KOROLEV, F. A., A. Yu. KLEMENTEVA, T. F. MESHCHERYAKOVA, and I. A. RAMAZINA. High-Contrast Light Filters with Multilayer Dielectric Coatings—71 [138]
_____ and O. F. KULINKOV. Use of Synchrotron Radiation to Study Reflection Spectra of Solids in the Vacuum Ultraviolet Region—442 [822]
KOROLYSHN, V. N. (see Dovgii, Yu. O.)—165 [307]
KOROTKOV, P. A. (see Kondilenko, I. I.)—125 [234]
_____. (see Kondilenko, I. I.)—494 [909]
KORSHUNOV, A. V. and L. I. MAMZEROVA. Spectral Line Strengths in the Spectrum of Low-Frequency Raman Scattering by Crystals of the Rhombic System with Four Molecules per Unit Cell—450 [834]
KORZH, P. D. and M. I. KUZNETSOVA. Electronic Transition and Isotopic Effect for $Ge^{12}O$ and $Ge^{14}O$ Molecules—286 [539]

KOSOBUKIN, V.A. (see Vettegren, V.I.)—311 [589]
KOVALEV, I.F. (see Lazarev, A.G.)—367 [689]
KOVALSKII, L.V. (see Polyanskii, V.K.)—420 [784]
_____. (see Polyanskii, V.K.)—455 [840]
KOVNER, M.A. (see Priyutov, M.V.)—373 [699]
KOVRIZHNYKH, N.A. (see Grebenshchikov, D.M.)—214 [398]
_____. (see Grebenshchikov, D.M.)—392 [733]
KOZEL, S.M. and G.R. LOKSHIN. Wave Scattering by a Statistically Rough Surface—253 [476]
KOZLOV, S.A. (see Grebenshchikov, D.M.)—214 [398]
_____. (see Grebenshchikov, D.M.)—392 [733]
KRIMAN, B.A. Double Monochromator with Two Diffraction Gratings—562 [1036]
KRISTOFEL, N.N. International Seminar on the Theory of Impurity Centers (Tallin, 1970)—259 [485]
KRIVOSHCHEKOV, G.V. (see Gainer, A.V.)—415 [772]
KRIVOSHCHEKOV, G.V., N.G. NIKULIN, R.I. SOKOLOVSKIY, and V.I. STROGANOV. Second Harmonic Aperture in Noncolinear Excitation by Ultrashort Light Pulses—58 [116]
_____, and R.I. SOKOLOVSKII. Second Harmonic Pulse Shape under Ultrashort Pulse Excitation—238 [448]
_____, V.I. STROGANOV, V.M. TARASOV, and V.I. SAMARIN. Excitation of Natural and Stimulated Optical Harmonics in a Nonlinear Prism—529 [981]
KRUGLOV, S.V. (see Gainer, A.V.)—415 [772]
KRUPSKII, N.P. (see Bugaev, V.N.)—388 [724]
KRYLOVA, S.I., L.A. LUIZOVA, and A.D. KHAKHAEV. Extension of the Method of Reabsorption within the Line Profile to an Inhomogeneous Light Source—563 [1037]
KUKANOV, A.B. and B.D. ORISA. The Vavilov-Cherenkov Radiation of an Electric Charge in a Uniaxial Gyrotropic Crystal—159 [299]
KULINKOV, O.F. (see Korolev, F.A.)—442 [822]
KULYASOV, V.N. (see Aleksandrov, E.B.)—170 [315]
KUPRIYANOV, V.N. (see Ivanov, A.V.)—171 [317]
KURASHOV, V.N. Effect of an Energy Sensitive Detector on The Informational Properties of Linear Optical Systems 65 [128]
KURBAKOVA, A.P. (see Aleksanyan, V.T.)—369 [692]
KURCHATOV, Yu.A. and I.A. MALINOV. Reflection of a Multimode Laser Beam from a Dielectric Interface—151 [283]
KUROVSKII, S.I. (see Gubanov, A.M.)—338 [644]
KUZMIN, V.L. (see Domnin, P.I.)—112 [209]
KUZNETSOV, A.B. (see Bogomolova, G.A.)—139 [259]
KUZNETSOV, V.A., V.N. KISTVIN, V.T. POTAPOV, and V.A. STRAKHOV. Wide-Aperture Michelson Interferometer for the Far Infrared—77 [151]
KUZNETSOVA, M.I. (see Korzh, P.D.)—286 [539]
KYUN, V.V. (see Gurev, T.T.)—410 [763]
KYUNTSEL, I.A., Yu.I. ROZENBERG, and A.D. GORDEEV. Temperature Dependence of Spin-Lattice Relaxation of Sb^{121} Nuclei in Antimony Trichloride Complexes—35 [67]
LABZOVSKII, L.N. (see Klimchitskaya, G.L.)—1 [3]
LAPUSHKIN, N.S. (see Lustberg, E.A.)—162 [303]
LATYPOVA, R.G. (see Pozdeev, N.M.)—32 [63]
LAZAREV, A.G. and I.F. KOVALEV. Application of Fok-Roothaan Wave Functions to the Determination of Intensities in the Infrared Spectra of Polyatomic Molecules. NH_3 Molecule—367 [689]
LAZOVSKAYA, V.R. and G.K. TUMAKAEV. Measurement of the Concentration of Excited Mercury Atoms behind a Shock Front Using Continuous Recording of the Interference Fringe Shift—257 [483]
LEBEDEV, V.V. (see Gainer, A.V.)—415 [772]
LESNENKO, L.G. (see Shcheglova, N.A.)—193 [360]
LEVINSKII, B.N. (see Vasilev, A.F.)—552 [1023]
LEVKOEV, I.I. (see Permogorov, V.I.—482 [890]
LI, L. (see Bogomolova, G.A.)—139 [259]
LIBOV, V.S. and N.G. BAKHSHIEV. Influence of the Effective Light Field on the Raman Spectra of Condensed Media. I: Relation between the Einstein Coefficients for Spontaneous and Stimulated Raman Scattering—24 [48]
LIFSHITS, E.B. (see Permogorov, V.I.)—482 [890]
LISITSA, V.S. Hydrogen Atom in a Rotating Electric Field—468 [862]
LISOVSKAYA, I.A. and M.V. ALFIMOV. Mechanism of Triplet Molecule Formation in Solid Solutions upon X-Ray Excitation—107 [200]
LITVINOV, G.S. (see Kondilenko, I.I.)—125 [234]
LOKSHIN, G.R. (see Kozel, S.M.)—253 [476]
LUIZOVA, L.A. (see Krylova, S.I.)—563 [1037]
LUSTBERG, E.A. and N.S. LAPUSHKIN. Criterion for Comparing Spectroscopic Instruments That Measure the Radiation of Remote Objects—162 [303]
LUTSKII, A.E. and S.N. VRAGOVA. Dipole-Dipole Interaction and the Influence of Solvents on the Vibrational Spectra of Molecules—113 [212]
LYAGUSHCHENKO, R.I. (see Golubovskii, Yu.B.)—10 [22]
MAGDICH, L.N. Pulsed Q-Switching of a CW Laser Cavity—161 [301]
MAKSHANTSEV, B.I. Contribution to the Theory of Radiationless Electronic Transitions I: Franck-Condon Factor for a Morse Oscillator When Parameter z Is Small—191 [355]
_____ and I.P. PERSTNEV. Calculation of the Franck-Condon Factor I: Case of Positive Parameter ii S—478 [881]
MAKUSHENKO, A.M., B.S. NEPORENT, and O.V. STOLBOVA. Reversible Orientational Photodichroism and Photoisomerization of Aromatic Azo Compounds I: Model of the System—295 [557]
_____, B.S. NEPORENT, and O.V. STOLBOVA. Reversible Orientational Photodichroism and Photoisomerization of Complex Organic Compounds in Viscous Solutions II: Azobenzene and Substituted Azobenzene Derivatives—397 [741]
MALINOV, I.A. (see Kurchatov, Yu.A.)—151 [283]
MALYI, V.I. (see Kondilenko, I.I.)—494 [909]
MALYSHEVA, A.F. (see Kalder, K.A.)—135 [252]
MAMIZEROVA, L.I. (see Korshunov, A.V.)—450 [834]
MAMYRIN, A.B. (see Aleksandrov, E.B.)—170 [315]
MARENNIKOV, S.I. (see Gainer, A.V.)—415 [772]
MARISOVA, S.V. (see Brodin, M.S.)—401 [749]
MARUSIN, V.D. (see Bogdanova, I.P.)—184 [339]
MASLOV, V.G. (see Kholmogorov, V.E.)—104 [195]
MATINYAN, E.G. (see Klimenko, I.S.)—250 [471]
_____. (see Klimenko, I.S.)—417 [776]
MATYUGIN, Yu.A., B.I. Troshin, and V.P. CHEBOTAEV. Method for Stabilizing He-Ne Laser Frequency Using the Lorentzian Absorption Profile in an External Gas Cell—56 [111]
MAXMANISHVILI, A.S. Fast Measurement of Integral Characteristics of Radiation Spectrum Using a Two-Beam Interferometer—153 [288]
MAZANKO, I.P. and G.A. PETRASHKO. Interaction of Neon $3s_2 - 2p_4$ and $3s_2 - 3p_4$ Transitions in a Traveling-Wave Regime—166 [309]
_____, Yu.S. TROSKHIN, and N.G. YAROSHENKO. Measurement of Steady-State Amplitude Fluctuations and Evaluation of the Natural Spectral-Line Width of He-Ne Laser Emission—335 [637]
MAZYRENKO, Yu.T. Polarization of Luminescence from Complex Molecules with Two-Photon Excitation. Dichroism of Two-Photon Light Absorption—413 [769]
MELEKHIN, G.V. Competition of Laser Oscillations in a System with a Common Upper Level—330 [628]
MELNIK, V.I., G.A. PUCHKOVSKAYA, N.P. KHARCHENKO, and M.T. SHPAK. Effect of Ultraviolet Illumination on the Electronic and Vibrational Spectra of Benzophenone—102 [190]
MESHCHERYAKOVA, T.F. (see Korolev, F.A.)—71 [138]
MESTECHKIN, M.M. (see Poltavets, V.N.)—460 [847]
MILOSLAVSKII, V.K. (see Ageev, L.A.)—561 [1034]
MIROVITSKII, D.I., I.F. BUDAGYAN, and V.V. USATYUK. Inverse Boundary-Value Problem for an Optically

Inhomogeneous Layer. Table of New Exact Solutions—538 [1000]
MISHAKOV, V.G., A.S. TIBILOV, and A.M. SHUKHTIN. Laser Action in Na-H_2 and K-H_2 Mixtures with Pulsed Injection of Metal Vapor into a Gas-Discharge Plasma—178 [324]
MISHIN, V.A. (see Davydov, E.M.)—550 [1020]
MOGILEVSKII, E.I. (see Drichko, N.M.)—241 [453]
MORGENSHTERN, Z.L. (see Alshits, E.I.)—504 [932]
MORINA, V.F. and E.B. SVESHNIKOVA. Mechanism of Energy Transfer from Ketones to Rare Earth Ions II: Effect of a Change in Electron Density at the Ketone Oxygen Atom—316 [599]
MOROZ, E.G. (see Dovgii, Yu.O.)—165 [307]
MOROZOV, V.P. and G.I. BEZVERKHNYAYA. Application of the Monte Carlo Method to the Determination of Harmonic Potential Constants—300 [565]
MUKHTAROV, E.I. (see Kitaigorodskii, A.I.)—377 [706]
MYLNIKOV, V.S. and A.N. DUNE. Absorption and Photoconduction Spectra of Heteroorganic Acetylenides of Copper—217 [405]
MYNBAEV, D.K. (see Bogdanov, V.V.)—51 [101]
MYSHKIS, D.A. (see Fugol, I.Ya.)—282 [529]
NABOIKIN, Yu.V., L.A. OGURTSOVA, A.P. PODGORNYI, and F.S. POKROVSKAYA. Properties of the Near Field of Lasing Organic Luminophors When Pumped by the Harmonics of Solid State Lasers—559 [1033]
NAGIBAROV, V.R. and I.A. NAGIBAROVA. Supermigration of Excitation Energy—37 [70]
NAGIBAROVA, I.A. (see Nagibarov, V.R.)—37 [70]
NAKHIMOVSKAYA, L.A. (see Popov, K.R.)—195 [363]
NASIBULLIN, R.S. (see Pozdeev, N.M.)—32 [63]
NATADZE, A.L. and D.E. ONOPKO. Stark Structure of the Ground State of a Tu^{3+} Ion in a Fluorite Crystal—500 [923]
NEPORENT, B.S. (see Makushenko, A.M.)—295 [557]
_____. (see Makushenko, A.M.)—397 [741]
_____. (see Shilov, V.B.)—29 [58]
_____ and N.G. BAKHSHIEV. Electronic Spectra of Polyatomic Molecules—349 [659]
NESMELOV, E.A. and G.P. KONYUKHOV. Theory of a Cutoff Interference Filter—68 [133]
NEUSTRUEV, V.B. (see Alshits, E.I.)—504 [932]
NIKULIN, N.G. (see Krivoshchekov, G.V.)—58 [116]
_____. (see Krivoshchekov, G.V.)—238 [448]
_____. (see Krivoshchekov, G.V.)—529 [981]
NOVICHENKO, V.N. (see Boldeskul, A.E.)—306 [579]
OGURTSOVA, L.A. (see Nabolkin, Yu.V.)—559 [1033]
OKSMAN, Ya.A. and V.N. SMIRNOV. Gallium Arsenide—348 [659]
ONOPKO, D.E. (see Natadze, A.L.)—500 [923]
ORISA, B.D. (see Kukanov, A.B.)—159 [299]
OSELEDCHIK, Yu.S. (see Galutva, Yu.N.)—173 [320]
_____. Effect of the Broadening Mechanism on the Absorption Spectrum of Nonmonochromatic Radiation—277 [520]
OVSYANKIN, V.V. and P.P. FEOFILOV. Cooperative Luminescence of Barium and Yttrium Fluorides Activated with Ytterbium and Holmium—510 [944]
PARSHIN, P.F. Effect of Diaphragm Geometry on the Instrumental Function of a Fourier Spectrometer—548 [1017]
PAVYLUK, A.A. (see Bogomolova, G.A.)—139 [259]
PENKIN, N.P. (see Ionikh, Yu.Z.)—453 [837]
PENTIN, Yu.A. (see Khristenko, L.V.)—444 [825]
PERELYGIN, I.S. and A.B. SHAIKHOVA. Infrared Spectrum of the Stretching Vibrations of Water in Acetonitrile Complexes—110 [205]
PERMOGOROV, V.I., L.A. SERDYUKOVA, E.B. LIFSHITS, and I.I. LEVKOEV. Study of Absorption and Luminescence Spectra of Thiacarbocyanine Dyes with Different Substituents in the Meso Position—482 [890]
PERSIKOV, M.V. (see Dyachenko, A.A.)—249 [469]
PERSTNEV, I.P. (see Makshantsev, B.I.)—478 [881]
PETRASCH, G.G. (see Isaev, A.A.)—180 [332]
PETRASHKO, G.A. (see Mazanko, I.P.)—166 [309]
PETROV, G.D. (see Zhuravle, V.A.)—447 [830]
PETUKHOV, Yu.M. (see Grinko, I.E.)—6 [14]
PODGORNYI, A.P. (see Naboikin, Yu.V.)—559 [1033]
POGORELOV, V.E. (see Boldeskul, A.E.)—306 [579]
_____. (see Kondilenko, I.I.)—203 [380]
POKROVSKAYA, F.S. (see Naboikin, Yu.V.)—559 [1033]
POKROVSKII, A.G. and M.Ya. ROZINSKII. Study of the Possibilities of Determining the Instrument Function of IR Spectrometers from Absorption Spectra—247 [464]
POLITOV, N.G. and B.M. TRAKHBROT. Infrared Absorption of Molecular Centers in Colored KBr Crystals—175 [322]
POLTAVETS, V.N. and M.M. MESTECHKIN. Electronic Absorption Spectra of Some Hydrocarbon Ions with Closed Shells—460 [847]
POLUEKTOV, N.S., N.P. EFRYUSHINA, and N.I. SMIRDOVA. Concentration Quenching of Luminescence of Pr, Nd, Sm, and Eu in Lanthanium-Oxychloride Crystal Phosphors—323 [613]
_____ and S.A. GAVA. Concentration Dependence of Lanthanide Luminescence in Yttrium Orthovanadate Phosphors—45 [86]
POLYANSKII, V.K. and L.V. KOVALSKII. Scattering of Coherent Radiation by a Rough Surface—420 [784]
_____. Total Measurement in Holography—455 [840]
PONAT, G.E. (see Strizhevskii, V.L.)—208 [388]
POP, S.S. and I.P. ZAPESOCHNYI. Excitation of Potassium Ions by Collisions with Argon Atoms—3 [8]
POPOV, K.R., L.V. SMIRNOV, L.A. NAKHIMOVSKAYA, and V.L. GREBNEVA. Electronic and Vibrationless States of Molecules Based on Biphenyl I: Polarization of the Electronic Transitions—195 [363]
POPOV, Yu.V. (see Adrianova, I.I.)—527 [976]
POTAPOV, V.T. (see Kuznetsov, V.A.)—77 [151]
POZDEEV, N.M., R.S. NASIBULLIN, R.G. LATYPOVA, V.G. VINOKUROV, and N.D. KONEVSKAYA. Hyperfine Structure in the Pyrazole Microwave Spectrum and the Quadropole Coupling Tensors of Nitrogen Nuclei—32 [63]
POZHIDAEV, V.N. Possibility of Exciting Acoustic Waves in a Water Droplet by Means of Giant Laser Pulses—255 [478]
PRIVALOV, V.E. Effect of a Transverse Magnetic Field on the Power Radiated by a He-Ne Laser—524 [970]
PRIYUTOV, M.V. and M.A. KOVNER. Calculation of Relative Strengths of Vibrational Structure Lines of the $^1A_{1g} \rightarrow {}^1B_{2u}$ Band in the Absorption Spectrum of Benzene—373 [699]
PUCHKOVSKAYA, G.A. (see Melnik, V.I.)—102 [190]
PUTILIN, E.S. (see Zhiginskii, A.G.)—223 [419]
PYRSIKOVA, P.D. (see Antipov, B.A.)—488 [899]
RABINKINA, N.V. (see Safronova, U.I.)—266 [496]
RADKEVICH, V.A. (see Zamkov, V.A.)—437 [811]
_____. Absolute Delay in the Cotton-Mouton Effect—458 [845]
RAMAZINA, I.A. (see Korolev, F.A.)—71 [138]
RAZUMOVA, E.R. (see Aleksanyan, V.T.)—369 [692]
REBANE, L.A. Structure of the Phonon Wing Spectra of the O_7^- and S_7^- Molecular Ions in a KI Crystal—123 [230]
REBANE, T.K. Modified Adiabatic Approximation in the Theory of Atomic and Molecular Spectra—189 [350]
REIFMAN, S.P. (see Zavt, G.S.)—205 [383]
REISHAKHRIT, A.L. (see Galant, E.I.)—142 [266]
REVZIN, R.M. (see Altshuler, Yu.G.)—344 [652]
RODIONOV, A.N. (see Danchinov, K.M.)—341 [648]
ROMANOV, V.P. and V.A. SOLOVEV. Correction to the Paper: Anisotropy Fluctuations and Light Scattering in Liquids—459 [846]
ROSENBERG, M.Sh and A.V. IOGANSEN. Dependence of the Torsional Vibration Frequency of OH-Groups on the Hydrogen Bond Energy—380 [711]
ROVINSKII, R.E. (see Vladimirova, N.M.)—91 [169]
ROZENBERG, Yu.I. (see Kyuntsel, I.A.)—35 [67]
ROZINSKII, M.Ya. (see Pokrovskii, A.G.)—247 [464]

ROZMAN, S.I. (see Alikhanova, Z.M.)—177 [325]
RUBINOV, A.N. (see Smolskaya, T.I.)—235 [440]
RYAZANOV, N.S. (see Klyucharev, A.N.)—187 [347]
RYSKIN, A.I. (see Kazanskii, S.A.)—325 [618]
_____ and G.I. KHILKO. Study of Piezospectroscopic Effect on a Group of Zero-Phonon Lines Associated with Centers of Various Types in a ZnS-Co Crystal Containing Stacking Faults—405 [755]
SAFRONOVA, U.I. (see Ivanov, L.N.)—263 [489]
_____, A.N. IVANOVA, and N.V. RABINKINA. Calculation of Energies of $1s^22s^22p^k-1s^22s2p^{k+1}-1s^22p^{k+1}$ Transitions for S IX–S XII—266 [496]
SAMARIN, V.I. (see Krivoshchekov, G.V.)—529 [981]
SAPOZHNIKOVA, V.A. (see Antipov, B.A.)—488 [899]
SAVUTSKII, A.I. (see Bratashevskii, Yu.A.)—557 [1030]
SEDELNIKOV, V.A., Yu.P. SINICHKIN, and V.V. TUCHIN. Some Properties of the Emission Spectrum of an Ar^+ Ion Laser—408 [761]
SEMENOVA, I.A., G.N. SINYAKOV, and G.P. GURINOVICH. Existence of Tautomerism in Porphyrin Molecules—198 [368]
SERDYUKOVA, L.A. (see Permogorov, V.I.)—482 [890]
SHAIKHOVA, A.B. (see Perelygin, I.S.)—110 [205]
SHAKHVERDOV, T.A. Highly Aggregated J-Form of Pseudoisocyanine in Solution—252 [475]
SHALABUTOV, Yu.K. (see Tipunin, Yu.V.)—345 [653]
SHCHEGLOVA, N.A. and L.G. LESNENKO. Study of the Electronic Spectra of Pentacene-6, 13-Quinone in Solution—193 [360]
SHCHEGOLEV, S.Yu. and V.I. KLENIN. Determination of the Size and Refractive Index of Particles from the Turbidity Spectrum of Disperse Systems—426 [794]
SHCHERBA, L.D. (see Belyaeva, A.A.)—210 [392]
_____. (see Belyaeva, A.A.)—309, [585]
SHEVCHENKO, Yu.N. (see Gurev, T.T.)—410 [763]
SHIGORIN, D.N. (see Danchinov, K.M.)—341 [648]
SHILOV, V.B. and B.S. NEPORENT. Reversible Photobleaching of Dye Solutions under Conditions of Spontaneous and Stimulated Emission—29 [58]
SHISHANIN, O.E. (see Zhukovskii, V.Ch.)—465 [857]
SHKLYAREVSKII, I.N. (see Ageev, L.A.)—561 [1034]
SHKLYAREVSKII, I.N. and A.F.A. EL SHAZLI. New Method for Measuring Dispersion in Dielectric Thin Films—435 [807]
_____ and T.I. KORNEEVA. Optical Constants of Silver Thin Films—144 [270]
_____, T.I. KORNEEVA, and T.G. GREBENNIK. Optical Constants of Thin Gold Films—221 [414]
_____ and A.I. USOSKIN. Optical and Structural Properties of Amorphous Antimony Thin Films—328 [623]
SHOSTAKOVSKII, S.M. (see Aleksanyan, V.T.)—369 [692]
SHPAK, M.T. (see Aslanidi, E.B.)—233 [436]
_____. (see Belokrinitskii, N.S.)—411 [766]
_____. (see Melnik, V.I.)—102 [190]
SHUKHTIN, A.M. (see Mishakov, V.G.)—176 [324]
SHURUPOVA, L.V. (see Vuks, M.F.)—80 [157]
SHUSHPANOV, I.A. (see Bartenev, O.A.)—94 [175]
_____. (see Grinko, I.E.)—6 [14]
SHUSHPANOV, O.E. (see Dyachenko, A.A.)—249 [469]
SHVEDOVA, N.D., S.M. KATS, N.A. GRIGORIEVA, and L.M. SVERDLOV. Experimental and Theoretical Determination of Stimulated Raman Parameters for Different Types of Substances—385 [719]
SINICHKIN, Yu.P. (see Sedelnikov, V.A.)—408 [761]
SINTSOV, V.N. (see Skrotskii, G.V.)—464 [854]
SINYAKOV, G.N. (see Semenova, I.A.)—198 [368]
SIRYUK, Yu.A. (see Bratashevskii, Yu.A.)—557 [1030]
SKOROBOGATOV, B.S. Optics of Scattering Media—464 [853]
SKRIPKIN, A.M. (see Bartenev, O.A.)—94 [175]
SKROTSKII, G.V. (see Kolokolov, A.A.)—342 [650]
_____ and V.N. SINTSOV. Third All-Union Symposium on the Physical Principles of Holography—464 [854]
SLAVINSKAYA, V.N. Spatial Filtering of Holographic Image Structure Produced by Nonlinear Distortions during Hologram Recording—531 [985]
SLYSHOV, A.G. (see Vagner, S.D.)—475 [876]
SMIRDOVA, N.I. (see Poluektov, N.S.)—323 [613]
SMIRNOV, A.G., D.I. STASELKO, and V.E. TERENTEV. Coherent Characteristics of a Ruby Laser with Controlled Lasing Time—52 [103]
SMIRNOV, L.V. (see Popov, K.R.)—195 [363]
SMIRNOV, V.N. (see Oksman, Ya.A.)—348 [659]
SMOLSKAYA, T.I. and A.N. RUBINOV. Effect of Different Kinds of Quenchers on the Energy Characteristics of Dye Lasers—235 [440]
SNEGOV, M.I. and A.S. CHERKASOV. Quenching of Fluorescence of Rhodamines by Anthracene Compounds—451 [835]
SOKOLOV, A.P. (see Aleksandrov, E.B.)—179 [329]
_____. (see Aleksandrov, E.B.)—353 [665]
SOKOLOVSKII, R.I. (see Krivoshchekov, G.V.)—238 [448]
SOKOLOVSKIY, R.I. (see Krivoshchekov, G.V.)—58 [116]
SOLDATOV, A.N. Special Features of the Energy Distribution of Electrons in a Hollow-Cathode Discharge in Helium—97 [181]
SOLOVEV, E.G. (see Bogomolov, A.S.)—256 [481]
SOLOVEV, V.A. (see Romanov, V.P.)—459 [846]
SONIN, A.S. (see Vasilevskaya, A.S.)—164 [305]
SOSKIN, S.I. (see Denisyuk, Yu.N.)—61 [121]
_____. (see Denisyuk, Yu.N.)—535 [992]
SPEVAK, N.V. (see Sverdlova, O.V.)—21 [43]
STAROSTIN, N.V. (see Zakharov, V.K.)—498 [919]
STARTSEV, G.P. (see Gerasimov, G.N.)—186 [344]
STASELKO, D.I. (see Smirnov, A.G.)—52 [103]
STOLBOVA, O.V. (see Makushenko, A.M.)—259 [557]
_____. (see Makushenko, A.M.)—397 [741]
STRAKHOV, V.A. (see Kuznetsov, V.A.)—77 [151]
STRIZHEVSKII, V.L. Anisotropy Effect in Raman Scattering by Ordinary Polaritons—448 [831]
_____. Spectroscopy of Crystals—449 [855]
_____, G.E. PONAT, and Yu.N. YASHKIR. Fermi Resonance of Polaritons and Its Manifestation in Raman Spectra—208 [388]
STROGANOV, V.I. (see Krivoshchekov, G.V.)—58 [116]
_____. (see Krivoshchekov, G.V.)—529 [981]
SUSHCHINSKII, M.M. (see Zhdanova, A.S.)—490 [903]
SVERDLOV, L.M. (see Shvedova, N.D.)—385 [719]
SVERDLOVA, O.V., N.V. SPEVAK, and K.N. ZELENIN. Spectroscopic Characteristics of the α, β-Unsaturated Azo Group Chromophore—21 [43]
SVESHNIKOVA, E.B. (see Morina, V.F.)—316 [599]
TARASOV, V.M. (see Krivoshchekov, G.V.)—529 [981]
TERENTEV, V.E. (see Adrianova, I.I.)—527 [976]
_____. (see Smirnov, A.G.)—52 [103]
TERZEMAN, V.F. (see Bartenev, O.A.)—94 [175]
_____. (see Grinko, I.E.)—6 [14]
TIBILOV, A.S. (see Mishakov, V.G.)—176 [324]
TIKHONOV, E.A. (see Aslanidi, E.B.)—233 [436]
TIMAKOVA, L.D. (see Ivanov, A.V.)—171 [317]
TIMOSHININ, V.S. and I.N. GODNEV. Calculation of Derivatives of the Inertia Tensor and Centrifugal Stretching Constants—200 [372]
_____. Coriolis Coupling Constants of the Halides of the Group V Elements—555 [1027]
TIPUNIN, Yu.V. and Yu.K. SHALABUTOV. Optical Properties of Corundum in the Infrared Spectral Region—345 [653]
TOLSTOI, M.N. (see Galant, E.I.)—142 [266]
TRAKHBROT, B.M. (see Politov, N.G.)—175 [322]
_____. (see Goldina, N.D.)—75 [146]
TROITSKII, Yu.V. Effect of the Method of Introducing Losses on the Competition of the Two Modes in a Gas Laser—82 [158]
TROITSKY, Yu.V. Continuous Variation of Spectral Line Width in a Gas Laser—558 [1031]
TROSHIN, B.I. (see Matyugin, Yu.A.)—56 [111]
TROSKHIN, Yu.S. (see Mazanko, I.P.)—335 [637]
TSETSEGOVA, E.I. He-Ne Dispersion Characteristics at 3.39 μm—172 [319]
TSVIRKO, M.P. (see Gradyushko, A.T.)—291 [548]

TUCHIN, V. V. (see Sedelnikov, V. A.)—408 [761]
TULUB, A. V. (see Balmakov, M. D.)—304 [574]
TUMAKAEV, G. K. (see Lazovskaya, V. R.)—257 [483]
TURKEVICH, V. V. (see Dovgii, Yu. O.)—165 [307]
TVOROGOV, S. D. and V. V. FOMIN. Inclusion of the Velocity Distribution of Molecules in the Problem of Shape of Spectral Line Wings—554 [1026]
USATYUK, V. V. (see Mirovitskii, D. E.)—538 [1000]
USOSKIN, A. I. (see Shklyarevskii, I. N.)—328 [623]
VAGNER, S. D., Yu. M. KAGAN, and A. G. SLYSHOV. Electrical and Optical Measurements in a Pulsed Discharge in Helium I—475 [876]
VASILEV, A. F. and B. N. LEVINSKII. Convergence of the Congruence Method—552 [1023]
VASILEVSKAYA, A. S. and A. S. SONIN. Electrooptical Properties of Cesium Nitrate and Potassium Tartrate—164 [305]
VERBOVETSKII, A. A. and V. B. FEDOROV. Diffraction Efficiency of Bleached Holograms—339 [646]
VEREMEI, V. A. (see Zolotarev, V. M.)—40 [77]
VETCHINKIN, S. I. (see Khristenko, S. V.)—269 [503]
VETTEGREN, V. I. and V. A. KOSOBUKIN. Effect of Anharmonicity on the Halfwidths of the Skeletal Vibration Bands of Polymers—311 [589]
VINOGRADOV, A. S. and T. M. ZIMKINA. Ultrasoft X-Ray Absorption Spectra of Silicon and Fluorine in the SiF_4 Molecule—288 [542]
_____. Ultrasoft X-Ray Absorption Spectra of Sulfur in Molecular Compounds—364 [685]
VINOKUROV, G. N. Theory of Synchronization of Laser Spikes by a Periodic Action—251 [473]
VINOKUROV, V. G. (see Pozdeev, N. M.)—32 [63]
VISHNYAKOV, A. V. (see Bundel, A. A.)—261 [488]
VLADIMIROVA, N. M., I. D. KONKOV, R. E. ROVINSKII, and N. V. CHEBURKIN. The Excitation Mechanism of the 4-p Configuration Levels of Ar II—91 [169]
VLASOV, N. G. (see Bogomolov, A. S.)—256 [481]
_____, O. V. FIRSOVA, and V. I. CHERNOV. Fresnel Hologram as a Complex Filter—419 [780]
VOISHVILLO, N. A. Study of Scattering Medium with Low Absorption Using the Two-Parameter Approximation Theory and G. V. Rozenberg's Theory. I: Use of the Two Parameter Approximation Theory—147 [275]
_____. Study of a Scattering Medium with Low Absorption Using the Two Parameter Approximate Theory and G. V. Rozenberg's Theory II: Application of Rozenberg's Theory—243 [458]
VOLOSHIN, V. A. (see Bratashevskii, Yu. A.)—557 [1030]
VRAGOVA, S. N. (see Lutskii, A. E.)—113 [212]
VUKS, M. F. and L. V. SHURUPOVA. Intensity of Light Scattering from Aqueous Solutions of Propanol—80 [157]
YAKOBSON, N. N. (see Gershun, V. V.)—470 [866]
YAREMKO, R. V. (see Klimusheva, G. V.)—130 [243]
YAROSHENKO, N. G. (see Mazanko, I. P.)—335 [637]
YASHKIR, Yu. N. (see Strizhevskii, V. L.)—208 [388]
YASINSKII, V. M. (see Borisova, M. S.)—231 [433]
YAVORSKII, B. M. (see Glushkov, Yu. I.)—43 [82]
ZAKHAROV, V. K. and N. V. STAROSTIN. Optical Properties of Quasi-Tetragonal Cerium Centers in Crystals—498 [919]
ZAMKOV, V. A. and V. A. RADKEVICH. Polarization Interferometer for Measuring Induced Anisotropy—437 [811]
ZAPASSKII, V. S. Measurement of Circular Anisotropy Using Chromatic Phase Plates—155 [291]
_____ and P. P. FEOFILOV. Magnetooptical Detection of Giant Spin Relaxation Times in Activated Crystals—463 [850]
ZAPESOCHNYI, I. P. (see Pop, S. S.)—3 [8]
ZAVT, G. S. and S. P. REIFMAN. Torsional Vibrations of Substituted Hydrocarbon Chains: Ketones—205 [383]
ZAYATS, I. A. and S. M. KISHKO. Spectrum and Excitation Functions of Some I_2 Bands—285 [536]
ZELENIN, K. N. (see Sverdlova, O. V.)—21 [43]
ZELIKSON, D. L. (see Zhuravle, V. A.)—447 [830]
ZHDANOVA, A. S., V. S. GORELIK, and M. M. SUSHCHINSKII. Raman Scattering in Liquid Crystals with an Argon Laser—490 [903]
ZHIGINSKII, A. G., E. S. PUTILIN, and Z. N. ELSNER. Design and Realization of Wide-Band Semitransparent Mirror—223 [419]
ZHIGLINSKII, A. G., A. A. KALMAKOV, and A. S. KOCHEMIROVSKII. Theory of an Atomic Beam Light Source and Its Experimental Verification II—472 [870]
ZHUKOVSKII, V. Ch. and O. E. SHISHANIN. Properties of the Synchrotron Radiation of Electrons Moving in a Weakly Focusing Magnetic Field—465 [857]
ZHURAVLE, V. A., D. L. ZELIKSON, and G. D. PETROV. Detection of Pulsed Laser Radiation by a Free Flame—447 [830]
ZILITIS, V. A. Semiempirical Calculation of Oscillator Strengths for Cadmium Atom—86 [161]
ZIMKINA, T. M. (see Vinogradov, A. S.)—288 [542]
_____. (see Vinogradov, A. S.)—364 [685]
ZOLIN, V. F. (see Alikhanova, Z. M.)—177 [325]
ZOLOTAREV, V. M., V. A. VEREMEI, and T. A. GORBUNOVA. Study of Dielectric Films with Strong Absorption Bands by the Method of Multiple Frustrated Total Internal Reflection—40 [77]
ZUBRILIN, N. G. (see Belokrinitskii, N. S.)—411 [766]
ZUEV, V. E. (see Antipov, B. A.)—488 [899]

OPTICS AND SPECTROSCOPY

SUBJECT INDEX

VOLUME 31, JULY-DECEMBER 1971 (pp. 1052-1061)

(Numbers in parenthesis refer to Russian original)

ATOMIC SPECTROSCOPY

Theory and Calculations

Energy Levels and Their Structure

CALCULATION OF CORRELATION ENERGY FOR A MANY-ELECTRON ATOM IN THE TWO-BODY APPROXIMATION, G. L. Klimchitskaya and L. N. Labzovskii 1 (3)
SEMIEMPIRICAL CALCULATION OF OSCILLATOR STRENGTHS FOR CADMIUM ATOM, V. A. Zilitis 86 (161)
METHOD OF REALIZATION OF BEAT NUCLEAR RESONANCE, E. B. Aleksandrov and A. P. Sokolov 179 (329)
MODIFIED ADIABATIC APPROXIMATION IN THE THEORY OF ATOMIC AND MOLECULAR SPECTRA, T. K. Rebane 189 (350)
THIRD-ORDER FEYNMAN DIAGRAMS FOR DEGENERATE STATES OF ATOMIC SYSTEMS, L. N. Ivanov, E. P. Ivanova, and U. I. Safronova 263 (489)
CALCULATION OF ENERGIES OF $1s^2 2s^2 2p^k - 1s^2 2s 2p^{k+1} - 1s^2 2p^{k+2}$ TRANSITIONS FOR S IX-S XII, U. I. Safronova, A. N. Ivanova, and N. V. Rabinkina 266 (496)
ASYMPTOTIC EXPANSIONS IN 1/Z IN PERTURBATION THEORY FOR PROBABILITIES OF RESONANCE, TRANSITIONS IN ATOMS, S. V. Khristenko and S. I. Vetchinkin 269 (503)
DETERMINATION OF THE UPPER AND LOWER LIMITS OF THE DISPERSION INTERACTION CONSTANT FROM THE DYNAMIC POLARIZABILITY, M. D. Balmakov and A. V. Tulub 304 (574)
HYDROGEN ATOM IN A ROTATING ELECTRIC FIELD, V. S. Lisitsa 468 (862)

Experimental

General

STUDY OF THE RELAXATION TIME OF OPTICALLY ORIENTED ATOMS OF ODD MERCURY ISOTOPES IN STABILIZED CELLS, I. E. Grinko, V. F. Terzeman, Yu. M. Petukhov, and I. A. Shushpanov 6 (14)
EFFECTIVE CROSS SECTION FOR ASSOCIATIVE IONIZATION OF CESIUM FROM THE $8^3P_{1/2}$ STATE, A. N. Klyucharev and N. S. Ryazanov 187 (347)
DISPLACEMENT OF THE 7947-A LINE OF RUBIDIUM BY FOREIGN GASES, V. V. Gershun, V. Khutorshchikov, and N. N. Yakobson 470 (866)

Determination of Oscillator Strengths

ESTIMATION OF THE LIFETIME ON THE $^3P_1$ NEON RESONANCE LEVEL USING INTERFERENCE PHENOMENA, S. A. Kazantsev and M. P. Chaika 273 (510)

Structure of Atomic Levels and Isotopic Shifts

DECAY OF 2^1S_0 STATES IN HELIUM AFTERGLOW, G. N. Gerasimov and G. P. Startsev 186 (344)

Plasma and Gas-Discharge Spectroscopy

POPULATION OF RESONANT LEVELS IN A DISCHARGE OF CYLINDRICAL CONFIGURATION, Yu. B. Golubovskii, Yu. M. Kagan, and R. I. Lyagushenko 10 (22)
SPECTRAL LINE BROADENING BY ELECTRONS IN NON-EQUILIBRIUM PARTLY IONIZED PLASMA, E. A. Asmaryan and Yu. L. Klimontovich 14 (30)
PHOTODECAY OF A NEGATIVE NITROGEN ION IN A PLASMA, G. A. Kobsev 18 (37)
SPECIAL FEATURES OF THE ENERGY DISTRIBUTION OF ELECTRONS IN A HOLLOW CATHODE DISCHARGE IN HELIUM, A. N. Soldatov 97 (181)
GAIN AT THE 3.51-μm AND 5.57-μm LINES IN A Xe^{132} DISCHARGE, E. B. Aleksandrov, V. N. Kulyasov, and A. B. Mamyrin 170 (315)
MECHANISM OF PULSED LASING OF THE GREEN THALLIUM LINES IN A THALLIUM IODIDE VAPOR DISCHARGE, A. A. Isaev, M. A. Kazaryan, and G. G. Petrash 180 (332)
PLASMA DIAGNOSTICS OF A PULSED DISCHARGE IN A PLASMA I, V. S. Borodin, V. D. Gebekov, and Yu. M. Kagan 280 (525)
ABSORPTION METHODS FOR MEASURING THE ABSOLUTE CONCENTRATION OF METASTABLE HELIUM ATOMS IN A PLASMA, I. Ya. Fugol, D. A. Myshkis, and O. N. Grigorashchenko 282 (529)
ELECTRICAL AND OPTICAL MEASUREMENTS IN A PULSED DISCHARGE IN HELIUM I, S. D. Vagner, Yu. M. Kagan, and A. G. Slyshov 475 (876)

Collisions between Particles, Excitation of Atomic Spectra

EXCITATION OF POTASSIUM IONS BY COLLISIONS WITH ARGON ATOMS, S. S. Pop and I. P. Zapesochnyi 3 (8)
EXCITATION MECHANISM OF THE 4-p CONFIGURATION LEVELS OF Ar II, N. M. Vladimirova, I. D. Konkov, R. E. Rovinskii, and N. V. Cheburkin 91 (169)
STUDY OF EXCITATION FUNCTIONS OF THE 6^3P_1 AND 6^3P_0 LEVELS OF MERCURY IN A SODIUM-MERCURY VAPOR MIXTURE, I. P. Bogdanova and V. D. Marusin 184 (339)
MEASUREMENT OF THE CONCENTRATION OF EXCITED MERCURY ATOMS BEHIND A SHOCK FRONT USING CONTINUOUS RECORDING OF THE INTERFERENCE FRINGE SHIFT, V. R. Lazovskaya and G. K. Tumakaev 257 (483)
RELATION BETWEEN THE OPTICAL BROADENING AND DEPOLARIZATION OF SPECTRAL LINES DUE TO COLLISIONS, Yu. V. Evdokimov and N. I. Kaliteevskii 346 (656)
MEASUREMENT OF RELAXATION CONSTANTS FOR THE 5^3P_1 STATE OF CADMIUM COLLIDING WITH INERT GAS ATOMS, E. B. Aleksandrov and A. P. Sokolov 353 (665)
EXCITATION OF NITROGEN MOLECULES IN A HIGH-FREQUENCY ARGON-NITROGEN DISCHARGE, O. P. Bochkova and N. V. Chernysheva 359 (677)

EXCITATION OF THE 2p-3s LINES OF NEON IN A HELIUM-NEON MIXTURE, Yu. Z. Ionikh and N. P. Penkin 453 453 (837)

MOLECULAR SPECTROSCOPY

Electronic Spectra

Theoretical and General

SPECTROSCOPIC CHARACTERISTICS OF THE α, β-UNSATURATED AZO GROUP CHROMOPHORE, O. V. Sverdlova, N. V. Spevak, and K. N. Zelenin 21 (43)
REVERSIBLE PHOTOBLEACHING OF DYE SOLUTIONS UNDER CONDITIONS OF SPONTANEOUS AND STIMULATED EMISSION, V. B. Shilov and B. S. Neporent 29 (58)
TEMPERATURE DEPENDENCE OF SPIN-LATTICE RELAXATION OF Sb^{121} NUCLEI IN ANTIMONY TRICHLORIDE COMPLEXES, I. A. Kyuntsel, Yu. I. Rozenberg, and A. D. Gordeev 35 (67)
EXCITED STATES IN TETRACYANOQUINODIMETHANE COMPLEXES WITH DIFFERENT DONORS, A. A. Alikin, V. S. Grechishkin, R. V. Grechishkina, and V. M. Gusarov 133 (249)
MODIFIED ADIABATIC APPROXIMATION IN THE THEORY OF ATOMIC AND MOLECULAR SPECTRA, T. K. Rebane 189 (350)
ELECTRONIC AND VIBRATIONAL STATES OF MOLECULES BASED ON BIPHENYL I: POLARIZATION OF THE ELECTRONIC TRANSITIONS, K. R. Popov, L. V. Smirnov, L. A. Nakhimovskaya, and V. L. Grebneva 195 (363)
EXISTENCE OF TAUTOMERISM IN PORPHYRIN MOLECULES, I. A. Semenova, G. N. Sinyakov, and G. P. Gurinovich 198 (368)
HIGHLY AGGREGATED J-FORM OF PSEUDOISOCYANINE IN SOLUTION, T. A. Shakhverdov 252 (475)
PROBABILITIES OF INTERCOMBINATION TRANSITION IN PORPHYRIN AND METALLOPORPHYRIN MOLECULES, A. T. Gradyushko and M. P. Tsvirko 291 (548)
REVERSIBLE ORIENTATIONAL PHOTODICHROISM AND PHOTOISOMERIZATION OF AROMATIC AZO COMPOUNDS I: MODEL OF THE SYSTEM, A. M. Makushenko, B. S. Neporent, and O. V. Stolbova 295 (557)
DETERMINATION OF THE UPPER AND LOWER LIMITS OF THE DISPERSION INTERACTION CONSTANT FROM THE DYNAMIC POLARIZABILITY, M. D. Balmakov and A. V. Tulub 304 (574)
CALCULATION AND INTERPRETATION OF THE ELECTRONIC SPECTRUM OF DECACYCLENE, B. G. Kasimov, S. G. Bogomolov, and V. A. Gubanov 362 (682)
REVERSIBLE ORIENTATIONAL PHOTODICHROISM AND PHOTOISOMERIZATION OF COMPLEX ORGANIC COMPOUNDS IN VISCOUS SOLUTIONS II: AZOBENZENE AND SUBSTITUTED AZOBENZENE DERIVATIVES, A. M. Makushenko, B. S. Neporent, and O. V. Stolbova 397 (741)
CALCULATION OF THE FRANCK-CONDON FACTOR I: Case of Positive Parameter ΔS, B. I. Makshantsev and I. P. Perstnev 478 (881)

Absorption Spectra

EFFECT OF ULTRAVIOLET ILLUMINATION ON THE ELECTRONIC AND VIBRATIONAL SPECTRA OF BENZOPHENONE, V. I. Melnik, G. A. Puchkovskaya, N. P. Kharchenko, M. T. Shpak 102 (190)
ABSORPTION SPECTRA AND EPR OF PHOTOGENERATED ANION-RADICALS OF Zn-TETRAPHENYLPORPHINE AND TETRAPHENYLPORPHINE, V. E. Kholmogorov and V. G. Maslov 104 (195)
STUDY OF THE ELECTRONIC SPECTRA OF PENTACENE-6, 13-QUINONE IN SOLUTION, N. A. Shcheglova and L. G. Lisnenko 193 (360)
ABSORPTION AND PHOTOCONDUCTION SPECTRA OF HETEROORGANIC ACETYLENIDES OF COPPER, V. S. Mylnikov and A. N. Dune 217 (405)
ELECTRONIC TRANSITION AND ISOTOPIC EFFECT FOR $Ge^{12}O$ and $Ge^{14}O$ MOLECULES, P. D. Korzh and M. I. Kuznetsova 286 (539)
ELECTRONIC ABSORPTION SPECTRA OF SOME HYDROCARBON IONS WITH CLOSED SHELLS, V. D. Poltavets and M. M. Mestechkin 460 (847)
STUDY OF ABSORPTION AND LUMINESCENCE SPECTRA OF THIACARBOCYANINE DYES WITH DIFFERENT SUBSTITUENTS IN THE MESO POSITION, V. I. Permogorov, L. A. Serdyukova, E. B. Lifshits, and I. I. Levkoev 482 (890)

Emission Spectra

SPECTRUM AND EXCITATION FUNCTIONS OF SOME I_2 BANDS, I. A. Zayats and S. M. Kishko 285 (536)
DETERMINATION OF THE VIBRATIONAL TEMPERATURE T_v OF THE N_2 MOLECULE IN THE $B^3\Pi_g$ STATE USING THE RELATIVE INTENSITY OF THE FIRST POSITIVE BAND SYSTEM, A. M. Gubanov and S. I. Kurovskii 338 (644)

Vibrational spectra

Theoretical and General

INFLUENCE OF THE EFFECTIVE LIGHT FIELD ON THE RAMAN SPECTRA OF CONDENSED MEDIA. I: RELATION BETWEEN THE EINSTEIN COEFFICIENTS FOR SPONTANEOUS AND STIMULATED RAMAN SCATTERING, V. S. Libov and N. G. Bakhshiev 24 (48)
EFFECT OF ULTRAVIOLET ILLUMINATION ON THE ELECTRONIC AND VIBRATIONAL SPECTRA OF BENZOPHENONE, V. I. Melnik, G. A. Puchkovskaya, N. P. Kharchenko, M. T. Shpak 102 (190)
INTERPRETATION OF SPECTROPHONE MEASUREMENTS OF THE LIFETIMES OF VIBRATIONAL STATES OF THE CO_2 MOLECULE, P. I. Domnin and V. L. Kuzmin 112 (209)
CALCULATION OF DERIVATIVES OF THE INERTIA TENSOR AND CENTRIFUGAL STRETCHING CONSTANTS, V. S. Timoshinin and I. N. Godnev 200 (372)
ROTATIONAL PROFILES OF VIBRATIONAL BANDS IN THE GAS PHASE RAMAN SPECTRA OF MOLECULES OF THE SPHERICAL TOP TYPE, M. R. Aliev 202 (376)
TORSIONAL VIBRATIONS OF SUBSTITUTED HYDROCARBON CHAINS: KETONES, G. S. Zavt and S. P. Reifman 205 (383)
FERMI RESONANCE OF POLARITONS AND ITS MANIFESTATION IN RAMAN SPECTRA, V. L. Strizhevskii, G. E. Ponat, and Yu. N. Yashkir 208 (388)
APPLICATION OF THE MONTE CARLO METHOD TO THE DETERMINATION OF HARMONIC POTENTIAL CONSTANTS, V. P. Morozov and G. I. Bezverkhnyaya 300 (565)
CALCULATION OF THE CENTRIFUGAL STRETCHING CONSTANTS OF POLYATOMIC MOLECULES, M. R. Aliev 301 (568)
COMPUTER CALCULATION OF THE TRUE PROFILES OF RAMAN LINES, A. E. Boldeskul, G. P. Buyan, I. I. Kondilenko, V. N. Novichenko, and V. E. Pogorelov 306 (579)
EFFECT OF ANHARMONICITY ON THE HALFWIDTHS OF THE SKELETAL VIBRATION BANDS OF POLYMERS, V. I. Vettegren and V. A. Kosobukin 311 (589)
THEORETICAL INVESTIGATION OF THE INFRARED SPECTRA OF BENZONITRILE, BENZONITRILE-d_5, AND PHENYLACETYLENE, K. M. Danchinov, A. N.

Rodionov, E. A. Gastilovich, and D. N. Shigorin 341 (648)
APPLICATION OF FOK–ROOTHAAN WAVE FUNCTIONS TO THE DETERMINATION OF INTENSITIES IN THE INFRARED SPECTRA OF POLYATOMIC MOLECULES. NH_2 MOLECULE, A. G. Lazarev and I. F. Kovalev 367 (689)
CALCULATION OF RELATIVE STRENGTHS OF VIBRATIONAL STRUCTURE LINES OF THE $^1A_{1g} \rightarrow {}^1B_{2u}$ BAND IN THE ABSORPTION SPECTRUM OF BENZENE, M. V. Priyutov and M. A. Kovner 373 (699)
ANALYSIS OF THE NORMAL VIBRATIONS OF VINYLSILANE AND VINYLSILANE-d_3, L. V. Khristenko and Yu. A. Pentin 444 (825)
ANISOTROPY EFFECT IN RAMAN SCATTERING BY ORDINARY POLARITONS, V. L. Strizhevskii 448 (831)
SOLUTION OF THE PROBLEM OF ANHARMONIC AND HIGH AMPLITUDE VIBRATIONS FOR POLYATOMIC MOLECULES IN EXACT NATURAL VIBRATIONAL COORDINATES, L. A. Gribov 456 (842)
ANHARMONIC DEFORMATION VIBRATIONS AND OVERLAP INTEGRALS FOR LINEAR TRIATOMIC MOLECULES, A. V. Gorokhov 480 (885)
CONVERGENCE OF THE CONGRUENCE METHOD, A. F. Vasilev and B. N. Levinskii 552 (1023)
INCLUSION OF THE VELOCITY DISTRIBUTION OF MOLECULES IN THE PROBLEM OF SHAPE OF SPECTRAL LINE WINGS, S. D. Tvorogov and V. V. Fomin 554 (1026)
CORIOLIS COUPLING CONSTANTS OF THE HALIDES OF THE GROUP V ELEMENTS, V. S. Timoshinin and I. N. Godnev 555 (1027)

Infrared Spectra

INFRARED SPECTRUM OF THE STRETCHING VIBRATIONS OF WATER IN ACETONITRILE COMPLEXES, I. S. Perelygin and A. B. Shaikhova 110 (205)
FERMI RESONANCE IN THE INFRARED SPECTRUM OF CYCLOPENTANONE, L. M. Ginzburg and V. S. Khlevnyuk 169 (313)
INFRARED SPECTRA OF KOH AND $(KOH)_2$ MOLECULES STABILIZED IN AN ARGON MATRIX AT 4.2 K, A. A. Belyaeva, M. I. Dvorkin, and L. D. Shcherba 210 (392)
INFRARED ABSORPTION SPECTRA OF Cs_2SO_4 MOLECULES STABILIZED IN INERT GAS MATRIXES AT 4.2 K, A. A. Belyaeva, M. I. Dvorkin, and L. D. Shcherba 309 (585)
VIBRATIONAL SPECTRA OF ETHYLENE OXIDE AND ETHYLENE-d_4 OXIDE, V. T. Aleksanyan, E. R. Razumova, A. P. Kurbakova, and S. M. Shostakovskii 369 (692)
DEPENDENCE OF THE TORSIONAL VIBRATION FREQUENCY OF OH-GROUPS ON THE HYDROGEN BOND ENERGY, M. Sh. Rozenberg and A. V. Iogansen 380 (711)
STUDY OF METHANE ABSORPTION LINE PROFILE USING A LASER TUNED BY A MAGNETIC FIELD, B. A. Antipov, V. E. Zuev, P. D. Pyrsikova, and V. A. Sapozhnikova 488 (899)

Raman Spectra

DEPENDENCE OF THE MAGNITUDE OF THE DAVYDOV SPLITTING IN RAMAN SPECTRA ON THE ELEMENTARY CELL PARAMETERS OF THE CRYSTAL, I. I. Kondilenko, P. A. Korotkov, and G. S. Litvinov 125 (234)
INFLUENCE OF THE EFFECTIVE LIGHT FIELD ON THE RAMAN SPECTRA OF CONDENSED MEDIA. I: RELATION BETWEEN THE EINSTEIN COEFFICIENTS FOR SPONTANEOUS AND STIMULATED RAMAN SCATTERING, V. S. Libov and N. G. Bakhshiev 24 (48)
RELATIONSHIP BETWEEN THE TEMPERATURE DEPENDENCES OF WIDTHS AND INTEGRATED INTENSITIES OF POLARIZED RAMAN LINES, I. I. Kondilenko, V. E. Pogorelov, and Khun Khue 203 (380)
COMPUTER CALCULATION OF THE TRUE PROFILES OF RAMAN LINES, A. E. Boldeskul, G. P. Buyan, I. I. Kondilenko, V. N. Novichenko, and V. E. Pogorelov 306 (579)
RAMAN SCATTERING IN LIQUID CRYSTALS WITH AN ARGON LASER, A. S. Zhdanova, V. S. Gorelik, and M. M. Sushchinskii 490 (903)

Stimulated Raman Scattering

SELF-ACTION OF LIGHT ARISING FROM STIMULATED RAMAN SCATTERING, V. S. Butylkin, A. E. Kaplan, and Yu. G. Khronopulo 120 (224)
EFFECT OF LASER FUNDAMENTAL RADIATION ON THE EXCITATION OF STIMULATED RAMAN SCATTERING (SRS) BY ITS SECOND HARMONIC, Ya. S. Bobovich and A. V. Bortkevich 225 (424)
EXPERIMENTAL AND THEORETICAL DETERMINATION OF STIMULATED RAMAN PARAMETERS FOR DIFFERENT TYPES OF SUBSTANCES, N. D. Shvedova, S. M. Kats, A. A. Grigoreva, and L. M. Sverdlov 385 (710)
EFFECT OF INTERMOLECULAR INTERACTION ON STIMULATED RAMAN SPECTRA OF PYRIDINE SOLUTIONS, I. I. Kondilenko, P. A. Korotkov and V. I. Malyi 493 (909)

Microwave Spectroscopy of Molecular Systems

HYPERFINE STRUCTURE IN THE PYRAZOLE MICROWAVE SPECTRUM AND THE QUADRUPOLE COUPLING TENSORS OF NITROGEN NUCLEI, N. M. Pozdeev, R. S. Nasibullin, R. G. Latypova, V. G. Vinokurov, and N. D. Konevskaya 32 (63)
TEMPERATURE DEPENDENCE OF SPIN-LATTICE RELAXATION OF Sb^{121} NUCLEI IN ANTIMONY TRICHLORIDE COMPLEXES, I. A. Kyuntsel, Yu. I. Rózenberg, and A. D. Gordeev 35 (67)
ABSORPTION SPECTRA AND EPR OF PHOTOGENERATED ANION-RADICALS OF Zn-TETRAPHENYLPORPHINE AND TETRAPHENYLPORPHINE, V. E. Kholmogorov and V. G. Maslov 104 (195)
EXCITED STATES IN TETRACYANOQUINODIMETHANE COMPLEXES WITH DIFFERENT DONORS, A. A. Alikin, V. S. Grechishkin, R. V. Grechishkina, and V. M. Gusarov 133 (249)
MEASUREMENT OF LIQUID NITROGEN ELECTROPHYSICAL PARAMETERS IN THE SUBMILLIMETER WAVELENGTH RANGE, Yu. G. Altshuler, L. I. Kats, and R. M. Revzin 344 (652)

Spectroscopy of Intermolecular Interactions and the Hydrogen Bond

EFFECT OF INTERMOLECULAR INTERACTIONS ON THE VIBRATIONAL SPECTRA OF MOLECULES. IX: METHOD FOR DETERMINING THE DIPOLE MOMENT AND POLARIZABILITY FUNCTIONS ON DIATOMIC MOLECULES IN SOLUTION, O. I. Arkhangelskaya and N. G. Bakhshiev 26 (53)
DIPOLE-DIPOLE INTERACTION AND THE INFLUENCE OF SOLVENTS ON THE VIBRATIONAL SPECTRA OF MOLECULES, A. E. Lutskii and S. N. Vragova 113 (212)
INTERMOLECULAR INTERACTIONS AND THE SPECTRA OF MOLECULES IN MULTICOMPONENT SOLUTIONS. III: DETERMINATION OF THE STABILIZATION ENERGY OF THE ELECTRONIC LEVELS

OF A MOLECULE AS A CONSEQUENCE OF UNIVERSAL INTERACTIONS ON CHANGING FROM THE VAPOR TO A BINARY SOLVENT, V. A. Gorodyskii and N. G. Bakhshiev 117 (218)
EFFECT OF INTERMOLECULAR VAN DER WAALS INTERACTIONS ON THE INFRARED SPECTRA OF HYDROGEN BONDED COMPLEXES, O. I. Arkhangelskaya and N. G. Bakhshiev 167 (311)
DEPENDENCE OF THE TORSIONAL VIBRATION FREQUENCY OF OH-GROUPS ON THE HYDROGEN BOND ENERGY, M. Sh. Rozenberg and A. V. Iogansen 380 (711)
EFFECT OF INTERMOLECULAR INTERACTION ON STIMULATED RAMAN SPECTRA OF PYRIDINE SOLUTIONS, I. I. Kondilenko, P. A. Korotkov, and V. I. Malyi 490 (909)

SPECTROSCOPY OF SOLIDS

Electronic Spectra

Theoretical and General

VAVILOV-CHERENKOV RADIATION OF AN ELECTRIC CHARGE IN A UNIAXIAL GYROTROPIC CRYSTAL, A. B. Kukanov and B. D. Orisa 159 (299)
ASYMPTOTICS OF A WEAKLY BOUND ELECTRON WAVE FUNCTION AND PHOTODISINTEGRATION CROSS SECTION FOR THE F^- COLOR CENTER, A. A. Berezin 320 (608)
USE OF SYNCHROTRON RADIATION TO STUDY REFLECTION SPECTRA OF SOLIDS IN THE VACUUM ULTRAVIOLET REGION, F. A. Korolev and O. F. Kulikov 442 (822)
CALCULATION OF LIGHT READSORPTION IN MOLECULAR CRYSTALS, V. A. Benderskii and S. I. Khudyaev 496 (915)

Fundamental Absorption Spectra

STRUCTURE OF THE PHONON WING IN SPECTRA OF THE O_2^- AND S_2^- MOLECULAR IONS IN A KI CRYSTAL, L. A. Rebane 123 (230)
EXCITON STATES OF SOME PURE AND MIXED MOLECULAR CRYSTALS I: ABSORPTION SPECTRA OF CRYSTALS OF p-DICHLORO, p-DEBROMO, AND p-BROMOCHLOROBENZENE, G. V. Klimusheva and R. V. Yaremko 130 (243)
POLARIZATION SHIFT OF ABSORPTION EDGE IN Ag_3SbS_3, Yu. O. Dovgii, V. N. Korolyshin, E. G. Moroz, and V. V. Turkevich 165 (307)
OPTICAL PROPERTIES OF CORUNDUM IN THE INFRARED SPECTRAL REGION, Yu. V. Tipunin and Yu. K. Shalabutov 345 (653)
SPECTRAL EVIDENCE OF SURFACE STATES IN THE ANTHRACENE CRYSTAL, M. S. Brodin, M. A. Dudinskii, and S. V. Marisova 401 (749)
OPTICAL CONSTANTS OF Ag I THIN FILMS IN THE REGION OF THE EXCITON BAND, L. A. Ageev, V. K. Miloslavskii, and I. N. Shklyarevskii 561 (1034)

Spectroscopy of Color Centers

STUDY OF A PIEZOSPECTROSCOPIC EFFECT ON A GROUP OF ZERO-PHONON LINES ASSOCIATED WITH CENTERS OF VARIOUS TYPES IN A ZnS-Co CRYSTAL CONTAINING STACKING FAULTS, A. I. Ryskin and G. L. Khilko 405 (755)
DISAPPEARANCE OF DEEP ELECTRON TRAPS IN ZnS UNDER THE INFLUENCE OF PRESSURE, Yu. A. Bratashevskii, V. A. Voloshin, A. I. Savutskii, and Yu. A. Siryuk 557 (1030)

Spectroscopy of Doped Crystals and Glasses

EXCITON AND ELECTRON-HOLE PROCESSES IN CaF_2 AND SrF_2 CRYSTAL PHOSPHORS, K. A. Kalder and A. F. Malysheva 135 (252)
SPECTROSCOPIC STUDY OF $KY(MoO_4)_2$ SINGLE CRYSTALS ACTIVATED BY Er^{3+} IONS, G. A. Bogomolova, A. A. Kaminskii, P. V. Klevtsov, A. B. Kuznetsov, L. Li, and A. A. Pavlyuk 139 (259)
EFFECT OF ALUMINUM COORDINATION IN GLASSES UPON THE SPECTROSCOPIC PROPERTIES OF A RARE-EARTH ACTIVATOR, E. I. Galant, A. L. Reishakhrit, and M. N. Tolstoi 142 (266)
EFFECT OF POLYMORPHIC TRANSFORMATIONS IN ISOOCTANE CRYSTALS ON THE LUMINESCENCE OF IMPURITY MOLECULES, D. M. Grebenshchikov, N. A. Kovrizhnykh, and S. A. Kozlov 214 (398)
FORMATION OF A BOUND STATE IN ZnS-Ni, ZnSe-Ni, CdS-Ni CRYSTALS UNDER LIGHT ABSORPTION IN A CHARGE-TRANSFER BAND, S. A. Kazanskii and A. I. Ryskin 325 (618)
SPECTRA AND TEMPERATURE DEPENDENCE OF PHOSPHORESCENCE OF AROMATIC COMPOUNDS IN CRYSTALLINE SOLUTIONS OF ISOOCTANE AND CARBON TETRACHLORIDE, D. M. Grebenshchikov, N. A. Kovrizhnykh, and S. A. Kozlov 392 (733)
OPTICAL PROPERTIES OF QUASI-TETRAGONAL CERIUM CENTERS IN CRYSTALS, V. K. Zakharov and N. V. Starostin 498 (919)
STARK STRUCTURE OF THE GROUND STATE OF A Tu^{2+} ION IN A FLUORITE CRYSTAL, A. L. Natadze and D. E. Onopko 500 (923)
QUANTUM YIELD OF RUBY LUMINESCENCE WITH ULTRAVIOLET EXCITATION, E. I. Alshits, Z. L. Morgenshtern, and V. B. Neustruev 504 (932)
SPECTROSCOPIC STUDY OF STIMULATED RADIATION OF Er^{3+} ACTIVATED CaF_2 - YF_3 CRYSTALS, A. A. Kaminskii 507 (938)

Vibrational Spectra

Theoretical and General

CALCULATION OF THE SMALL-VIBRATION SPECTRA OF MOLECULAR CRYSTALS, A. I. Kitaigorodskii and E. I. Mukhtarov 377 (706)

Infrared Spectra

INFRARED ABSORPTION OF MOLECULAR CENTERS IN COLORED KBr CRYSTALS, N. G. Politov and B. M. Trakhbrot 175 (322)

Raman Spectra

DEPENDENCE OF THE MAGNITUDE OF THE DAVYDOV SPLITTING IN RAMAN SPECTRA ON THE ELEMENTARY CELL PARAMETERS OF THE CRYSTAL, I. I. Kondilenko, P. A. Korotkov, and G. S. Litvinov 125 (234)
SPECTRAL LINE STRENGTHS IN THE SPECTRUM OF LOW-FREQUENCY RAMAN SCATTERING BY CRYSTALS OF THE RHOMBIC SYSTEM WITH FOUR MOLECULES PER UNIT CELL, A. V. Korshunov and L. I. Mamizerova 450 (834)
RAMAN SCATTERING IN LIQUID CRYSTALS WITH AN ARGON LASER, A. S. Zhdanova, V. S. Gorelik, and M. M. Sushchinskii 490 (903)

X-Ray Spectroscopy

X-RAY $L_{2,3}$ SPECTRA OF THE QUANTUM EFFICIENCY OF SULFUR PHOTOEMISSION IN SULFIDES AND SULFATES, A. V. Ivanov, L. D. Timakova, and V. N. Kupriyanov 171 (317)
ULTRASOFT X-RAY ABSORPTION SPECTRA OF SILICON AND FLUORINE IN THE SiF_4 MOLECULE, A. S. Vinogradov and T. M. Zimkina 288 (542)

ULTRASOFT X-RAY ABSORPTION SPECTRA OF SULFUR IN MOLECULAR COMPOUNDS, A. S. Vinogradov and T. M. Zimkina 364 (685)

LUMINESCENCE

Theoretical and General

CONTRIBUTION TO THE THEORY OF RADIATIONLESS ELECTRONIC TRANSITIONS I: FRANCK-CONDON FACTOR FOR A MORSE OSCILLATOR WHEN PARAMETER x IS SMALL, B. I. Makshantsev 191 (355)
LETTER TO THE EDITOR, A. A. Bundel, A. V. Vishnyakov, and V. A. Chashchin 261 (488)
POLARIZATION OF LUMINESCENCE FROM COMPLEX MOLECULES WITH TWO-PHOTON EXCITATION. DICHROISM OF TWO-PHOTON LIGHT ABSORPTION, Yu. T. Mazurenko 413 (769)

Atoms and Molecules

Photoluminescence

REVERSIBLE PHOTOBLEACHING OF DYE SOLUTIONS UNDER CONDITIONS OF SPONTANEOUS AND STIMULATED EMISSIONS, V. B. Shilov and B. S. Neporent 29 (58)
EFFECT OF CRYSTALLIZATION CONDITIONS AND CONCENTRATION ON THE LUMINESCENCE SPECTRUM OF SOME AROMATIC HYDROCARBONS IN n-PARAFFIN SOLUTION AT 77 K, Yu. I. Grushkov, B. M. Yavorskii, and V. A. Ganin 43 (82)
LUMINESCENCE SPECTRA AND STRUCTURE OF COMPLEX EUROPIUM COMPOUNDS I. RELATIVE INTENSITIES OF CERTAIN ELECTRIC AND MAGNETIC DIPOLE TRANSITIONS OF Eu^{3+} IN LOW-SYMMETRY COMPLEXES, M. I. Gaiduk 48 (93)
DECAY OF 2^1S_0 STATES IN HELIUM AFTERGLOW, G. N. Gerasimov and G. P. Startsev 186 (344)
QUENCHING OF FLUORESCENCE OF RHODAMINES BY ANTHRACENE COMPOUNDS, M. I. Snegov and A. S. Cherkasov 451 (835)
STUDY OF ABSORPTION AND LUMINESCENCE SPECTRA OF THIACARBOCYANINE DYES WITH DIFFERENT SUBSTITUENTS IN THE MESO POSITION, V. I. Permogorov, L. A. Serdyukova, E. B. Lifshits, and I. I. Levkoev 482 (890)

Other Forms of Excitation

FLUORESCENCE OF PYRENE SOLUTIONS UNDER INTENSE EXCITATION, S. D. Babenko and V. A. Benderskii 485 (895)

Solids

Photoluminescence

EFFECT OF PHASE CHANGES IN CRYSTALLINE CYCLOHEXANE ON THE FLUORESCENCE SPECTRA OF 3,4-BENZOPYRENE, L. P. Gladkin and L. A. Klimova 314 (596)
RAMAN LUMINESCENCE OF $EuAl_2O_3$-Mn^{4+}, P. P. Feofilov 462 (849)
QUANTUM YIELD OF RUBY LUMINESCENCE WITH ULTRAVIOLET EXCITATION, E. I. Alshits, Z. L. Morgenshtern, and V. B. Neustruev 504 (932)
SPECTROSCOPIC STUDY OF STIMULATED RADIATION OF Er^{3+} ACTIVATED CaF_2 - YF_3 CRYSTALS, A. A. Kaminskii 507 (938)
COOPERATIVE LUMINESCENCE OF BARIUM AND YTTRIUM FLUORIDES ACTIVATED WITH YTTERBIUM AND HOLMIUM, V. V. Ovsyankin and P. P. Feofilov 510 (944)

Other Forms of Excitation

MECHANISM OF THE TRIPLET MOLECULE FORMATION IN SOLID SOLUTIONS UPON X-RAY EXCITATION, I. A. Lisovskaya and M. V. Alfimov 107 (200)

Crystal Phosphors

CONCENTRATION DEPENDENCE OF LANTHANIDE LUMINESCENCE IN YTTRIUM ORTHOVANADATE PHOSPHORS, N. S. Poluektov and S. A. Gava 45 (86)
EXCITON AND ELECTRON-HOLE PROCESSES IN CaF_2 AND SrF_2 CRYSTAL PHOSPHORS, K. A. Kalder and A. F. Malysheva 135 (252)
CONCENTRATION QUENCHING OF LUMINESCENCE OF Pr, Nd, Sm, AND Eu IN LANTHANIUM-OXYCHLORIDE CRYSTAL PHOSPHORS, N. S. Poluektov, N. P. Efryushina, and N. I. Smirdova 323 (613)

Energy Transfer in Luminescent Systems

SUPERMIGRATION OF EXCITATION ENERGY, V. R. Nagibarov and L. A. Nagibarova 37 (70)
EFFECT OF PARTICLE CHARGE ON RADIATIONLESS ENERGY TRANSFER I: VISCOUS SOLUTIONS, E. N. Bodunov 219 (410)
MECHANISM OF ENERGY TRANSFER FROM KETONES TO RARE EARTH IONS II: EFFECT OF A CHANGE IN ELECTRON DENSITY AT THE KETONE OXYGEN ATOM, V. F. Morina and E. B. Sveshnikova 316 (599)
EFFECT OF ELECTROSTATIC INTERACTION OF PARTICLES ON NONRADIATIVE ENERGY TRANSFER IN LIQUID SOLUTIONS. PART II, E. N. Bodunov 513 (949)

PHYSICAL OPTICS

Propagation and Energetics of Light

General

MEASUREMENT OF CIRCULAR ANISOTROPY USING CHROMATIC PHASE PLATES, V. S. Zapasskii 155 (291)
CRITERION FOR COMPARING SPECTROSCOPIC INSTRUMENTS THAT MEASURE THE RADIATION OF REMOTE OBJECTS, E. A. Lustberg and N. S. Lapushkin 162 (303)
NARROWING OF THE PROFILE OF A SPECTRAL LINE BY ALIGNMENT IN THE CASE OF RADIATION TRAPPING, M. P. Chaika 274 (513)
EFFECT OF THE BROADENING MECHANISM ON THE ABSORPTION SPECTRUM OF NONMONOCHROMATIC RADIATION, Yu. S. Oseledchik 277 (520)
SELF-FOCUSING KINETICS OF SHORT LIGHT PULSES, A. A. Kolokolov and G. V. Skrotskii 342 (650)
LIGHT ABSORPTION BY VAPOR WITH HIDDEN ALIGNMENT, M. P. Chaika 356 (670)
INVERSE BOUNDARY-VALUE PROBLEM FOR AN OPTICALLY INHOMOGENEOUS LAYER. TABLE OF NEW EXACT SOLUTIONS, D. I. Mirovitskii, I. F. Budagyan, and V. V. Usatyuk 538 (1000)
EXTENSION OF THE METHOD OF REABSORPTION WITHIN THE LINE PROFILE TO AN INHOMOGENEOUS LIGHT SOURCE, S. I. Krylova, L. A. Luizova, and A. D. Khakhaev 563 (1037)

Photometry

FAST MEASUREMENT OF INTEGRAL CHARACTERISTICS OF RADIATION SPECTRUM USING A TWO-BEAM INTERFEROMETER, A.S. Mazmanishvili 153 (288)

Reflection and Refraction

STUDY OF DIELECTRIC FILMS WITH STRONG ABSORPTION BANDS BY THE METHOD OF MULTIPLE FRUSTRATED TOTAL INTERNAL REFLECTION, V.M. Zolotarev, V.A. Veremei, and T.A. Gorbunova 40 (77)
REFLECTION OF A MULTIMODE LASER BEAM FROM A DIELECTRIC INTERFACE, Yu.A. Kurchatov and I.A. Malinov 151 (283)
OPTICAL AND STRUCTURAL PROPERTIES OF AMORPHOUS ANTIMONY THIN FILMS, I.N. Shklyarevskii and A.I. Usoskin 328 (623)
NEW METHOD FOR MEASURING DISPERSION IN DIELECTRIC THIN FILMS, I.N. Shklyarevskii and A.F. El Shazli 435 (807)
USE OF SYNCHROTRON RADIATION TO STUDY REFLECTION SPECTRA OF SOLIDS IN THE VACUUM ULTRAVIOLET REGION, F.A. Korolev and O.F. Kulikov 442 (822)
OPTICAL CONSTANTS OF Ag I THIN FILMS IN THE REGION OF THE EXCITON BAND, L.A. Ageev, V.K. Miloslavskii, and I.N. Shklyarevskii 561 (1034)

Scattering

INTENSITY OF LIGHT SCATTERING FROM AQUEOUS SOLUTIONS OF PROPANOL, M.F. Vuks and L.V. Shurupova 80 (157)
STUDY OF SCATTERING MEDIUM WITH LOW ABSORPTION USING THE TWO-PARAMETER APPROXIMATION THEORY AND G.V. ROZENBERG'S THEORY I: USE OF THE TWO-PARAMETER APPROXIMATION THEORY, N.A. Voishvillo 147 (275)
STUDY OF A SCATTERING MEDIUM WITH LOW ABSORPTION USING THE TWO-PARAMETER APPROXIMATION THEORY AND G.V. ROZENBERG'S THEORY II: APPLICATION OF ROZENBERG'S THEORY N.A. Voishvillo 243 (458)
WAVE SCATTERING BY A STATISTICALLY ROUGH SURFACE, S.M. Kozel and G.R. Lokshin 353 (476)
LIGHT SCATTERING STUDY OF THE PROPERTIES OF BINARY MIXTURE THERMODYNAMIC FUNCTIONS NEAR THE CRITICAL POINT OF VAPORIZATION, V.N. Bugaev, N.P. Krupskii, and A.V. Chalyi 388 (724)
SCATTERING OF COHERENT RADIATION BY A ROUGH SURFACE, V.K. Polyanskii and L.V. Kovalskii 420 (784)
STUDY OF MULTIPLE LIGHT SCATTERING, II, D.K. Beridze and G.R. Dzhobava 423 (788)
DETERMINATION OF THE SIZE AND REFRACTIVE INDEX OF PARTICLES FROM THE TURBIDITY SPECTRUM OF DISPERSE SYSTEMS, S.Yu. Shchegolev and V.I. Klenin 426 (794)
CORRECTION TO THE PAPER: ANISOTROPY FLUCTUATIONS AND LIGHT SCATTERING IN LIQUIDS, V.P. Romanov and V.A. Solovev 459 (846)

Magnetooptics and Electrooptics

OBSERVATION OF THE TRANSVERSE FARADAY EFFECT IN OPTICALLY ORIENTED VAPORS OF THE NATURAL Hg^{199} AND Hg^{201} ISOTOPE MIXTURE, O.A. Bartenev, A.M. Skripkin, I.E. Grinko, V.F. Terzeman, and I.A. Shushpanov 94 (175)
ELECTROOPTICAL PROPERTIES OF CESIUM NITRATE AND POTASSIUM TARTRATE, A.S. Vasilevskaya and A.S. Sonin 164 (305)
LIGHT BEAM DEFLECTION CONTROLLED WITH A PRISM OF LEAD MAGNESIONIOBATE CRYSTALS, A.A. Berezhnoi 432 (803)
ABSOLUTE DELAY IN THE COTTON-MOUTON EFFECT, V.A. Radkevich 458 (845)
MAGNETOOPTICAL DETECTION OF GIANT SPIN RELAXATION TIMES IN ACTIVATED CRYSTALS, V.S. Zapasskii and P.P. Feofilov 463 (850)

Metal Optics

OPTICAL CONSTANTS OF SILVER THIN FILMS, I.N. Shklyarevskii and T.I. Korneeva 144 (270)
OPTICAL CONSTANTS OF THIN GOLD FILMS, I.N. Shklyarevskii, T.I. Korneeva, and T.G. Grebennik 221 (414)

Interference and Diffraction

THEORY OF A CUTOFF INTERFERENCE FILTER, E.A. Nesmelov and G.P. Konyukhov 68 (133)
EXPERIMENTAL STUDY OF A MULTIPLE-BEAM REFLECTION INTERFEROMETER WITH A MATCHED FRONT MIRROR, N.D. Goldina and Yu.V. Troitskii 75 (146)
NONLINEAR INTERFERENCE EFFECT IN A RANDOM FIELD, Yu.N. Galutva and Yu.S. Oseledchik 173 (320)
NARROW-BAND ELECTRICALLY CONTROLLED INTERFERENCE-POLARIZING FILTER FOR SOLAR PHYSICS STUDIES, N.M. Drichko, S.B. Ioffe, and E.I. Mogilevskii 241 (453)
POLARIZATION INTERFEROMETER FOR MEASURING INDUCED ANISOTROPY, V.A. Zamkov and V.A. Radkevich 437 (811)

Holography

Theoretical and General

SCANNING OF A WAVE FIELD BY AN OPTICAL SYSTEM OF ARBITRARY APERTURE, Yu.N. Denisyuk and S.I. Soskin 61 (121)
OBTAINING HOLOGRAMS OF FOCUSED IMAGES IN MULTIMODE LASER RADIATION, I.S. Klimenko and E.G. Matinyan 250 (471)
METHOD FOR TIME AVERAGING IN HOLOGRAPHIC INTERFEROMETRY OF NONPERIODICALLY MOVING BODIES, A.S. Bogomolov, N.G. Vlasov, and E.G. Solovev 256 (481)
DIFFRACTION EFFICIENCY OF BLEACHED HOLOGRAMS, A.A. Verbovetskii and V.B. Fedorov 339 (646)
TOTAL MEASUREMENT IN HOLOGRAPHY, V.K. Polyanskii and L.V. Kovalskii 455 (840)
SPATIAL FILTERING OF HOLOGRAPHIC IMAGE STRUCTURE PRODUCED BY NONLINEAR DISTORTIONS DURING HOLOGRAM RECORDING, V.N. Slavinskaya 531 (985)
HOLOGRAPHIC CORRECTION OF DEFORMATIONAL ABERRATIONS OF THE MAIN MIRROR OF A TELESCOPE, Yu.N. Denisyuk and S.I. Soskin 535 (992)

Applications of Holography

RECORDING OF FOCUSED-IMAGE HOLOGRAMS USING RADIATION SCATTERED BY THE OBJECT AS THE REFERENCE WAVE, I.S. Klimenko and E.G. Matinyan 417 (776)
FRESNEL HOLOGRAM AS A COMPLEX FILTER, N.G. Vlasov, O.V. Firsova, and V.I. Chernov 419 (780)

Nonlinear Optics

General

NONLINEAR INTERFERENCE EFFECT IN A RANDOM FIELD, Yu. N. Galutva and Yu. S. Oseledchik 173 173 (320)
SPATIAL FILTERING OF HOLOGRAPHIC IMAGE STRUCTURE PRODUCED BY NONLINEAR DISTORTIONS DURING HOLOGRAM RECORDING, V. N. Slavinskaya 531 (985)

Nonlinear Optical Characteristics

EXCITATION OF NATURAL AND STIMULATED OPTICAL HARMONICS IN A NONLINEAR PRISM, G. V. Krivoshchekov, N. G. Nikulin, V. I. Stroganov, V. M. Tarasov, and V. I. Samarin 529 (981)

Nonlinear Spectral Phenomena

NONLINEAR ABSORPTION OF RUBY LASER RADIATION BY AZULENE SOLUTIONS, E. B. Aslanidi, E. A. Tikhonov, and M. T. Shpak 233 (436)
HIGH SPEED SPECTROMETRY IN THE PRESENCE OF ABSORPTION NONLINEARITY, B. A. Kiselev and B. D. Fainberg 544 (1011)

LASERS

Theoretical and General

METHOD FOR STABILIZING He-Ne LASER FREQUENCY USING THE LORENTZIAN ABSORPTION PROFILE IN AN EXTERNAL GAS CELL, Yu. A. Matyugin, B. I. Troshin, and V. P. Chebotaev 56 (111)
SECOND HARMONIC APERTURE IN NONCOLINEAR EXCITATION BY ULTRASHORT LIGHT PULSES, G. V. Krivoshchekov, N. G. Nikulin, R. I. Sokolovskii, and V. I. Stroganov 58 (116)
EFFECT OF THE METHOD OF INTRODUCING LOSSES ON THE COMPETITION OF THE TWO MODES IN A GAS LASER, Yu. V. Troitskii 82 (158)
REFLECTION OF A MULTIMODE LASER BEAM FROM A DIELECTRIC INTERFACE, Yu. A. Kurchatov and I. A. Malinov 151 (283)
GAIN AT THE 3.51-μm AND 5.57-μm LINES IN A Xe^{136} DISCHARGE, E. B. Aleksandrov, V. N. Kulyasov, and A. B. Mamyrin 170 (315)
MODE LOCKING USING SINGLE-SIDE-BAND MODULATION, N. A. Brodovich 228 (428)
SECOND HARMONIC PULSE SHAPE UNDER ULTRASHORT PULSE EXCITATION, G. V. Krivoshchekov, N. G. Nikulin, and R. I. Sokolovskii 238 (448)
THEORY OF SYNCHRONIZATION OF LASER SPIKES BY A PERIODIC ACTION, G. N. Vinokurov 251 (472)
COMPETITION OF LASER OSCILLATIONS IN A SYSTEM WITH A COMMON UPPER LEVEL, G. V. Melekhin 330 (628)
DETECTION OF PULSED LASER RADIATION BY A FREE FLAME, V. A. Zhuravlev, D. L. Zelikson, and G. D. Petrov 447 (830)
DIFFRACTION SPLITTING OF THE FREQUENCIES IN A GAS RING LASER I, E. E. Fradkin 514 (952)
EFFECT OF A TRANSVERSE MAGNETIC FIELD ON THE POWER RADIATED BY A He-Ne LASER, V. E. Privalov 524 (970)
EXCITATION OF NATURAL AND STIMULATED OPTICAL HARMONICS IN A NONLINEAR PRISM, G. V. Krivoshchekov, N. G. Nikulin, V. I. Stroganov, V. M. Tarasov, and V. I. Samarin 529 (981)
CONTINUOUS VARIATION OF SPECTRAL LINE WIDTH IN A GAS LASER, Yu. V. Troitsky 558 (1031)
DOUBLE MONOCHROMATOR WITH TWO DIFFRACTION GRATINGS, B. A. Kriman 562 (1036)

Resonators

PULSED Q-SWITCHING OF A CW LASER CAVITY, L. N. Magdich 161 (301)
TIME DEVELOPMENT OF WIDE-BAND-GENERATION SPECTRA OF Nd^{3+}-DOPED PHOSPHATE GLASSES AND DISORDERED CRYSTALS IN RESONATORS WITH DISPERSION, N. S. Belokrinitskii, N. G. Zubrilin, and M. T. Shpak 411 (766)
THREE-MIRROR RING OPTICAL RESONATOR WITH A GAUSSIAN DIAPHRAGM, V. F. Boitsov 519 (961)
STUDY OF INTRACAVITY MODULATION OF A RUBY LASER WITH A FREQUENCY CLOSE TO THE DIFFERENCE FREQUENCY OF NEIGHBORING AXIAL MODES, I. I. Adrianova, Yu. V. Popov, and V. E. Terentev 527 (976)

Gas Lasers

LOCK-IN BAND OF A GAS RING LASER, V. V. Bogdanov and D. K. Mynbaev 51 (101)
SPATIAL AND TEMPORAL COHERENCE OF THE RADIATION OF PULSED NEON AND THALLIUM GAS LASERS, G. V. Abrosimov 54 (106)
EFFECT OF THE METHOD OF INTRODUCING LOSSES ON THE COMPETITION OF THE TWO MODES IN A GAS LASER, Yu. V. Troitskii 82 (158)
INTERACTION OF NEON $3s_2$-$2p_i$ AND $3s_2$-$3p_i$ TRANSITIONS IN A TRAVELING-WAVE REGIME, I. P. Mazanko and G. A. Petrashko 166 (309)
He-Ne DISPERSION CHARACTERISTICS AT 3.39 μm, E. I. Tsetsegova 172 (319)
LASER ACTION IN $Na-H_2$ AND $K-H_2$ MIXTURES WITH PULSED INJECTION OF METAL VAPOR INTO A GAS-DISCHARGE PLASMA, V. G. Mishakov, A. S. Tibilov, and A. M. Shukhtin 176 (324)
INTERACTION OF MODES IN A TRAVELING-WAVE ARGON LASER, M. S. Borisova and V. M. Yasinskii 231 (433)
MEASUREMENT OF STEADY-STATE AMPLITUDE FLUCTUATIONS AND EVALUATION OF THE NATURAL SPECTRAL-LINE WIDTH OF He-Ne LASER EMISSION, I. P. Mazanko, Yu. S. Troshkin, and N. G. Yaroshenko 335 (637)
SOME PROPERTIES OF THE EMISSION SPECTRUM OF AN Ar^+ ION LASER, V. A. Sedelnikov, Yu. P. Sinichkin, and V. V. Tuchin 408 (761)
OPTIMUM CONDITIONS FOR EMISSION OF THE 5208.3-Å, 5681.9-Å, AND 6470.9-Å LINES IN A SINGLY IONIZED KRYPTON LASER, T. T. Gurev, V. V. Kyun, and Yu. N. Shevchenko 410 (763)

Liquid Lasers

REVERSIBLE PHOTOBLEACHING OF DYE SOLUTIONS UNDER CONDITIONS OF SPONTANEOUS AND STIMULATED EMISSION, V. B. Shilov and R. S. Neporent 29 (58)
EFFECT OF DIFFERENT KINDS OF QUENCHERS ON THE ENERGY CHARACTERISTICS OF DYE LASERS, T. I. Smolskaya and A. N. Rubinov 235 (440)
PROPERTIES OF THE NEAR FIELD OF LASING ORGANIC LUMINOPHORS WHEN PUMPED BY THE HARMONICS OF SOLID STATE LASERS, Yu. V. Naboikin, L. A. Ogurtsova, A. P. Podgornyi, and F. S. Pokrovskaya 559 (1033)

Solid-State Lasers

COHERENT CHARACTERISTICS OF A RUBY LASER WITH

CONTROLLED LASING TIME, A. G. Smirnov, D. I. Staselko, and V. E. Terentev 52 (103)
GENERATION OF SECOND OPTICAL HARMONIC IN THE CUBIC PHASE OF $BaTiO_3$, A. A. Arabidze, G. F. Chanturiya, and V. P. Kokoeva 346 (655)
TIME DEVELOPMENT OF THE WIDE-BAND-GENERATION SPECTRA OF Nd^{3+}-DOPED PHOSPHATE GLASSES AND DISORDERED CRYSTALS IN RESONATORS WITH DISPERSION, N. S. Belokrinitskii, N. G. Zubritin, and M. T. Shpak 411 (766)
STUDY OF INTRACAVITY MODULATION OF A RUBY LASER WITH A FREQUENCY CLOSE TO THE DIFFERENCE FREQUENCY OF NEIGHBORING AXIAL MODES, I. I. Adrianova, Yu. V. Popov, and V. E. Terentev 527 (976)

Laser Applications

POSSIBILITY OF EXCITING ACOUSTIC WAVES IN A WATER DROPLET BY MEANS OF GIANT LASER PULSES, V. N. Pozhidaev 255 (478)
STUDY OF METHANE ABSORPTION LINE PROFILE USING A LASER TUNED BY A MAGNETIC FIELD, B. A. Antipov, V. E. Zuev, P. D. Pyrsikova, and V. A. Sapozhnikova 488 (899)
RAMAN SCATTERING IN LIQUID CRYSTALS WITH AN ARGON LASER, A. S. Zhdanova, V. S. Gorelik, and M. M. Sushchinskii 490 (903)

GEOMETRICAL AND APPLIED OPTICS

General

SCANNING OF A WAVE FIELD BY AN OPTICAL SYSTEM OF ARBITRARY APERTURE, Yu. N. Denisyuk and S. I. Soskin 61 (121)
EFFECT OF AN ENERGY SENSITIVE DETECTOR ON THE INFORMATIONAL PROPERTIES OF LINEAR OPTICAL SYSTEMS, V. N. Kurashov 65 (128)
USE OF SHADOWGRAPHS FOR SPECTRAL FUNCTIONAL ANALYSIS BY THE METHODS OF COHERENT OPTICS, A. A. Dyachenko, M. V. Persikov, and O. E. Shushpanov 249 (469)
CONVERSION OF AN IMAGE FROM THE INFRARED TO THE VISIBLE REGION WITH A LARGE ANGULAR APERTURE, A. V. Gainer, S. V. Kruglov, G. V. Krivoshchekov, V. V. Lebedev, and S. I. Marennikov 415 (772)
INVERSE BOUNDARY-VALUE PROBLEM FOR AN OPTICALLY INHOMOGENEOUS LAYER. TABLE OF NEW EXACT SOLUTIONS, D. I. Mirovitskii, I. F. Budagyan, and V. V. Usatyuk 538 (1000)

Design of Optical Systems

DESIGN AND REALIZATION OF WIDE-BAND SEMITRANSPARENT MIRRORS, A. G. Zhiginskii, E. S. Putilin, and Z. N. Elsner 223 (419)
LIGHT BEAM DEFLECTION CONTROLLED WITH A PRISM OF LEAD MAGNESIONIOBATE CRYSTALS, A. A. Berezhnoi 432 (803)

Spectral Instruments

CRITERION FOR COMPARING SPECTROSCOPIC INSTRUMENTS THAT MEASURE THE RADIATION OF REMOTE OBJECTS, E. A. Lustberg and N. S. Lapushkin 162 (303)
STUDY OF THE POSSIBILITIES OF DETERMINING THE INSTRUMENT FUNCTION OF IR SPECTROMETERS FROM ABSORPTION SPECTRA, A. G. Pokrovskii and M. Ya. Rozinskii 247 (464)
EFFECT OF DIAPHRAGM GEOMETRY ON THE INSTRUMENTAL FUNCTION OF A FOURIER SPECTROMETER, P. F. Parshin 548 (1017)

Interference and Diffraction Instruments

WIDE-APERTURE MICHELSON INTERFEROMETER FOR THE FAR INFRARED, V. A. Kuznetsov, V. N. Listvin, V. T. Potapov, and V. A. Strakhov 77 (151)
POLARIZATION INTERFEROMETER FOR MEASURING INDUCED ANISOTROPY, V. A. Zamkov and V. A. Radkevich 437 (811)

Sources and Detectors

FAST MEASUREMENT OF INTEGRAL CHARACTERISTICS OF RADIATION SPECTRUM USING A TWO-BEAM INTERFEROMETER, A. S. Mazmanishvili 153 (288)
EFFECT OF THE BULB ON BRIGHTNESS DISTRIBUTION OF STRAIGHT TUBULAR GAS-DISCHARGE LAMPS, A. S. Doinikov and V. G. Dorogov 440 (817)
PROPERTIES OF THE SYNCHROTRON RADIATION OF ELECTRONS MOVING IN A WEAKLY FOCUSING MAGNETIC FIELD, V. Ch. Zhukovskii and O. E. Shishanin 465 (857)
THEORY OF AN ATOMIC BEAM LIGHT SOURCE AND ITS EXPERIMENTAL VERIFICATION II, A. G. Zhiglinskii, A. A. Kalmakov, and A. S. Kochemirovskii 472 (870)
USE OF THE PRK MERCURY LAMP AS AN INTENSE PULSED SOURCE OF A LINE SPECTRUM IN THE NEAR INFRARED, E. M. Davydov and V. A. Mishin 550 (1020)
EXTENSION OF THE METHOD OF REABSORPTION WITHIN THE LINE PROFILE TO AN INHOMOGENEOUS LIGHT SOURCE, S. I. Krylova, L. A. Luizova, and A. D. Khakhaev 563 (1037)

Filters

THEORY OF A CUTOFF INTERFERENCE FILTER, E. A. Nesmelov and G. P. Konyukhov 68 (133)
HIGH-CONTRAST LIGHT FILTERS WITH MULTILAYER DIELECTRIC COATINGS, F. A. Korolev, A. Yu. Klementeva, T. F. Meshcheryakova, and I. A. Ramazina 71 (138)
NARROW-BAND ELECTRICALLY CONTROLLED INTERFERENCE-POLARIZING FILTER FOR SOLAR PHYSICS STUDIES, N. M. Drichko, S. B. Ioffe, and E. I. Moglevskii 241 (453)

Book Reviews

GALLIUM ARSENIDE, Ya. A. Oksman and V. N. Smirnov 348 (659)
ELECTRONIC SPECTRA OF POLYATOMIC MOLECULES, B. S. Neporent and N. G. Bakhshiev 349 (659)
OPTICAL INSTRUMENTS AND TECHNIQUE, D. Yu. Galpern 349 (660)
THE NATURE OF LIGHT, P. P. Feofilov 350 (661)

Reports

INTERNATIONAL SEMINAR ON THE THEORY OF IMPURITY CENTERS (TALLIN, 1970), N. N. Kristofel 259 (485)

The Optical Society of America

Officers of the Society

President A. B. MEINEL, Optical Sciences Center, University of Arizona, Tucson, Ariz. 85721
President-Elect ROBERT E. HOPKINS, Tropel, Inc., 52 West Avenue, Fairport, N.Y. 14550
Past President B. H. BILLINGS, American Embassy, Taipei, Taiwan
Executive Director JARUS W. QUINN, OSA, 2100 Pennsylvania Avenue N.W., Washington, D.C. 20037
Executive Secretary MARY E. WARGA, OSA, 2100 Pennsylvania Avenue, N.W., Washington, D.C. 20037
Treasurer ARCHIE I. MAHAN, Applied Physics Laboratory, 8621 Georgia Avenue, Silver Spring, Md. 20910
Editor Journal of the Optical Society of America DAVID L. MACADAM, 68 Hammond Street, Rochester, N.Y. 14615
Editor Applied Optics JOHN N. HOWARD, AFCRL, Bedford, Mass. 01730
Chairman Technical Council C. J. KOESTER, American Optical Corp. Research Laboratory, P.O. Box 187, Framingham Centre, Mass. 01701

Directors-at-Large

J. W. GOODMAN (74)* Applied Electronics Laboratory, Stanford University, Stanford, Calif. 94305
W. J. SMITH (74)* Infrared Industries, Inc., P.O. Box 989, Santa Barbara, Calif. 93102
EMIL WOLF (74)* Dept. Physics & Astronomy, University of Rochester, Rochester, N.Y. 14627
S. M. MACNEILLE (72)* Corporate Executive Office, American Optical Corp., Framingham, Mass. 01701
B. J. THOMPSON (72)* Institute of Optics, University of Rochester, N.Y. 14627
D. WILLIAMS (72)* Physics Department, Kansas State University, Manhattan, Kan. 66502
FREDERICK W. PAUL (73)* NASA Goddard SFC, Greenbelt, Md. 20771
ROBERT R. SHANNON (73)* Optical Sciences Center, University of Arizona, Tucson, Ariz. 85721
BORIS P. STOICHEFF (73)* Physics Department, University of Toronto, Toronto 5, Ont.

* *Term expires December 31*

Local Sections

ANN ARBOR
M. Bender *President*
H. I. McDavitt, *Jr. Secretary*
2842 Hawks Ave.
Ann Arbor, Mich. 48104
J. Braithwaite *Treasure*

CHICAGO
J. E. DeSilva *President*
S. Beran *Treasurer*
D. Blazek *Secretary*
255 S. Judson Ave.
Bensenville, Ill. 60106

DELAWARE VALLEY
N. Rosenberg *President*
E. L. McGrody *Secretary*
Frankford Arsenal N2300-110-2
Tacony and Bridge Sts.
Philadelphia, Pa. 19137
M. J. Oulton *Treasurer*

DETROIT
M. A. Short *President*
S. Cohen *Treasurer*
L. C. Westwood *Secretary*
Ford Motor Company
P.O. Box 2053
Dearborn, Mich. 48121

FLORIDA
J. G. Hirschberg *President*
H. R. Gordon *Secretary-Treasurer*
Physics Department
University of Miami
Coral Gables, Fla. 33124

GREATER NEW YORK
G. W. Stroke *President*
G. Geier *Secretary*
Keuffer & Esser Corporation
Morristown, N. J. 07960
E. Kallet *Treasurer*

GULF COAST
J. A. Jordan Jr. *President*
T. A. Decker *Vice-President*
T. Bruce *Secretary/Treasurer*
Southwestern Eng. & Equip. Co.
4252 Richmond Ave.
Houston, Tex. 77001

HUDSON-MOHAWK
H. E. Breed *President*
M. J. Pryor *Treasurer*
T. Ruel *Secretary*
Siena College
Loudonville, N. Y. 12211

HUNTSVILLE
J. F. Porter, *Jr. President*
F. Vann *Treasurer*
R. V. Hembree *Secretary*
1100 Owens Dr., S.E.
Huntsville, Ala. 35801

NATIONAL CAPITAL
E. F. DuPré *President*
I. H. Malitson *Secretary*
National Bureau of Standards
Washington D.C. 20234
J. Coulter *Treasurer*

NEW ENGLAND
K. McCarthy *President*
W. Striker *Treasurer*
J. Zimmerman *Secretary*
Itek Corp.
10 Maguire Rd.,
Lexington, Mass. 02173

NORTHERN CALIFORNIA
J. B. Sonderman *President*
J. C. Urbach *Treasurer/Secretary*
Xerox Palo Alto Research Center
3180 Porter Dr.
Palo Alto, Calif. 94304

PITTSBURGH
G. B. Bradt *President*
W. Turini *Secretary*
342 Olancha Avenue
Pittsburgh, Pa. 15213
J. Unertl *Treasurer*

ROCHESTER
C. Smoyer *President*
H. M. Smith *Treasurer*
R. L. Lamberts *Secretary*
Eastman Kodak Company
Rochester, N. Y. 14650

ROCKY MOUNTAIN
M. Bottema *President*
J. Austin *Secretary*
Ball Brothers Research Corp.
Box 1062
Boulder, Colo. 80301
R. Zastrow *Treasurer*

SAN DIEGO
P. C. Fletcher *President*
R. D. Anderson *Treasurer*
D. Silva *Secretary*
128 Seventh St.
Del Mar, Calif. 92014

SOUTHERN CALIFORNIA
D. E. McCarthy *President*
R. W. Lindberg *Treasurer*
T. E. Godfrey *Secretary*
Northrop Corp.
500 E. Orangethorpe
Anaheim, Calif. 92801

SOUTHWESTERN CONNECTICUT
N. L. Alpert *President*
W. W. Allen, *Vice President*
S. R. Sixby *Secretary*
Perkin-Elmer Corp.
100 Wooster Heights Rd.
Danbury, Conn. 06900
R. D. DeWaard *Treasurer*

TEXAS
W. S. Thompson III *President*
R. E. Crossland *Treasurer*
R. E. Johnson *Secretary*
Texas Instruments, Inc.
P.O. Box 5012
Dallas, Tex. 75222

TUCSON
J. D. Gaskill *President*
R. R. Rodig *Treasurer*
J. E. Gray *Secretary*
Optical Sciences Center
University of Arizona
Tucson, Arizona 85721

Filler material—Not in Russian original